Southern FLIGHT

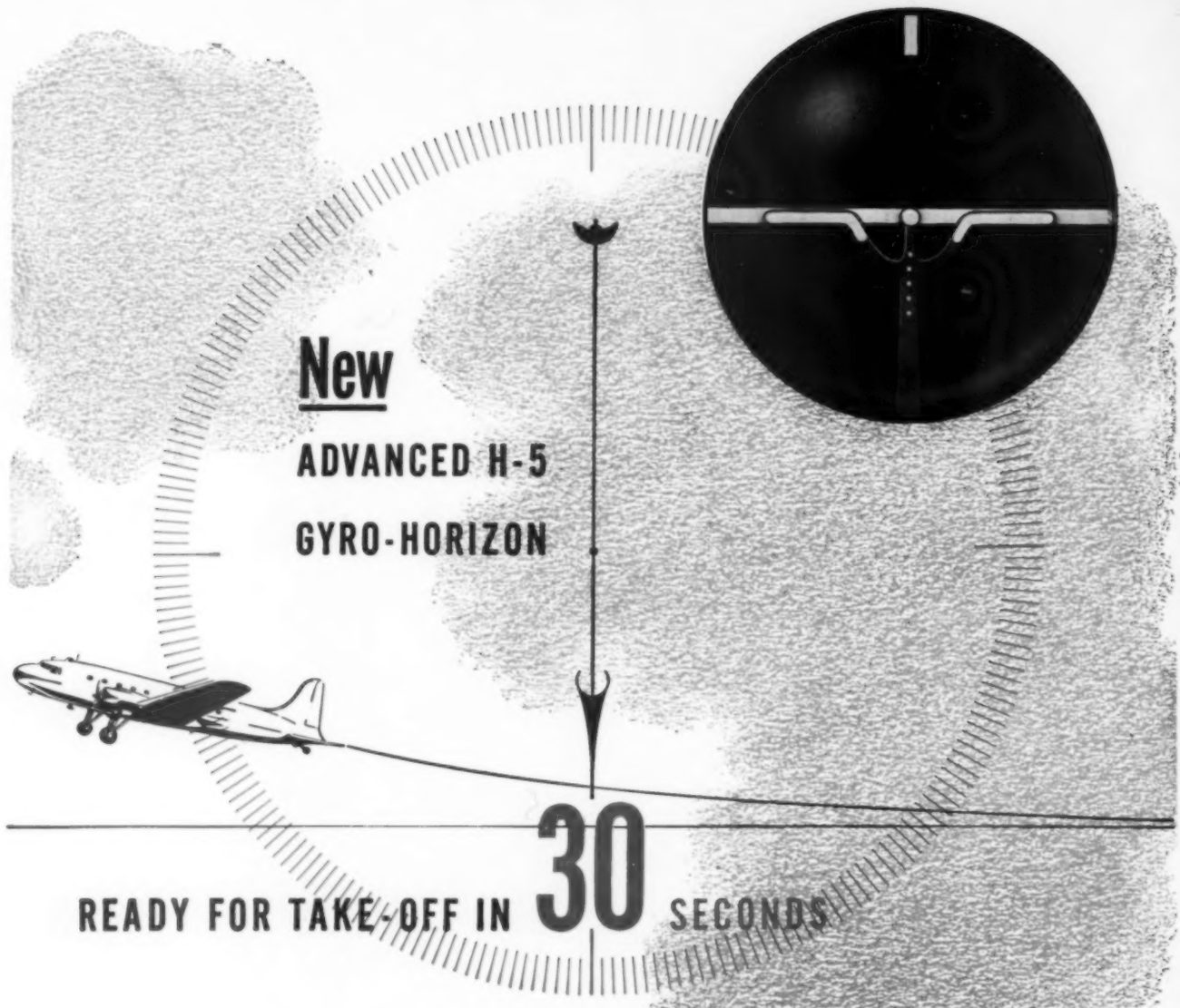
Including MODERN AIRPORTS

APRIL 1950
35 cents

Aero

THE LIBRARY OF CONGRESS
SERIAL RECORD
APR 13 1950

RYAN NAVION 205



The new Sperry H-5 Gyro-Horizon features the fastest gyro *erection device* yet developed to help transports reduce ground time and gain flying time. The initial erection cycle is completed in 30 seconds after the main switch is turned on . . . permitting immediate take-off. This *advanced* artificial horizon promotes airline schedule reliability by thus expediting take-offs, saving valuable time on routine stops and turnarounds.

The erection device which makes this possible operates in conjunction with a small remote power control unit. Other design changes feature latest developments for increased reliability and longer service life. Improved dial with larger miniature airplane increases angle of vision 40% . . . giving the pilot clearer visibility, easier and more accurate readings of bank and pitch.

When the Gyro-Horizon is paired with the Sperry Gyrosyn Compass, the pilot gets *attitude* and *directional* indications he can rely on. Result . . . precise attitude and directional control regardless of visibility.

OTHER FEATURES OF THE H-5. Non-tumbling . . . no caging devices needed. Freedom of roll through 360 degrees. Gyro won't tumble even during a complete loop.

This new Gyro-Horizon is another example of Sperry's *advanced* research and engineering *timed* to today's *advanced* aviation service. Our Aeronautical Department will be glad to supply complete information.

SPERRY GYROSCOPE COMPANY

DIVISION OF THE SPERRY CORPORATION, GREAT NECK, NEW YORK • NEW YORK • CLEVELAND • NEW ORLEANS • LOS ANGELES • SAN FRANCISCO • SEATTLE

LANDING IN DALLAS?

STOP AT TEXAIR, RED BIRD AIRPORT

Operating one of the finest Instrument and Airline Transport Pilot schools in the Southwest, veteran pilot W. J. "Jack" Shelton runs top-flite Texair Aviation at the big Red Bird Airport in Dallas. Its accommodations, including excellent hangar and maintenance facilities, ready transportation to the city, and Mobilgas Aircraft and Mobiloil Aero service, make it a must for stops in the Dallas area.

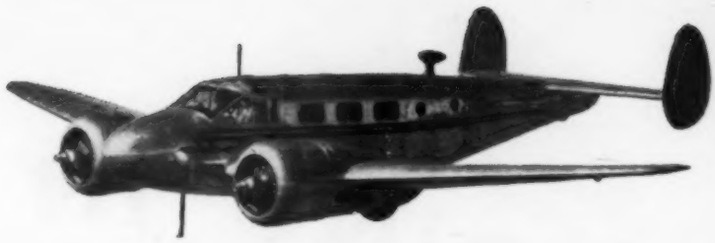
Mobilgas AIRCRAFT

FORWARD WITH Aviation

Mobiloil AERO

MAGNOLIA PETROLEUM COMPANY

Certified



Beechcraft

Service

Aircraft, like people, are individuals—each with its history—each with its destiny—each with a record of its own . . . . .

The **history** of your Beechcraft covers years of constant research, design and development, years of proving until a final product was developed that was the dream of aeronautical engineers the world over.

•

The **destiny** of your Beechcraft is concealed within your usage for business and pleasure. It may take you quickly from appointment to appointment or from vacation to your next civic responsibility. What ever the destiny the utility of the Beechcraft offers service unlimited.

•

The **record** of your Beechcraft will depend largely on the maintenance and service it receives. Again like individuals, whose family doctors can serve them best, the Certified Beechcraft Service Stations are best qualified to serve Beechcraft owners, for our service facilities offer the same technical ability and tools used to build your Beechcraft.

Aircraftsmen, Inc.
Will Rogers Field
Oklahoma City, Oklahoma

Amarillo Aircraft
Tradewind Airport
Amarillo, Texas

Anderson Air Activities
General Mitchell Field
Milwaukee, Wisc.

Truax Field
Madison, Wisc.

Atlantic Aviation Service
New Castle County Airport
Wilmington, Delaware

Atlantic Aviation
Teterboro Air Terminal
Teterboro, New Jersey

Butler Co., Aviation Division
Municipal Airport
Chicago, Ill.

Washington National Airport
Washington, D. C.

Francis Aviation
Capitol City Airport
Lansing, Michigan

Harte Flying Service
Municipal Airport
Wichita, Kansas

Ohio Aviation Company
Dayton Municipal Airport
Vandalia, Ohio

G. E. Penn
Gregg County Airport
Longview, Texas

J. D. Reed Co., Inc.
Municipal Airport
Houston, Texas

New Orleans Airport
New Orleans, La.

Roscoe Turner Aeronautical Corp.
Municipal Airport
Indianapolis, Ind.

Southwest Airmotive
Love Field
Dallas, Texas

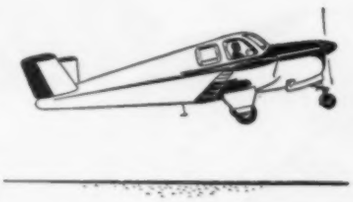
Tulsair Distributors, Inc.
Hangar 5, Municipal Airport
Tulsa, Oklahoma

Wings, Incorporated
Wings Field
Ambler, Pennsylvania

Philadelphia International Airport
Philadelphia, Pennsylvania

To obtain the best service from your Beechcraft and for prompt attention to maintenance and overhaul requirements, visit the Certified Beechcraft Service Stations listed above.

This greater-than-ever Beechcraft is a better-than-ever value!

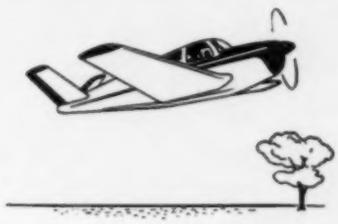


Increased Horsepower Rating at Take-off

Take-off horsepower rating is now 196 hp at 2450 rpm, providing improved take-off performance without sacrifice of long engine life, low operating and maintenance costs.

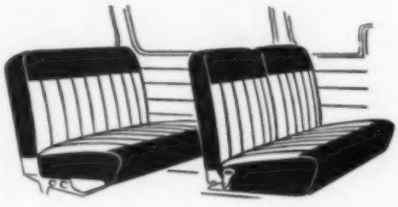
Increased, Faster Flap Travel, New Beechcraft Propeller

Improved short field take-off and landing performance is made possible by greater degree of flap travel and the greater static thrust of the new Beechcraft propeller.



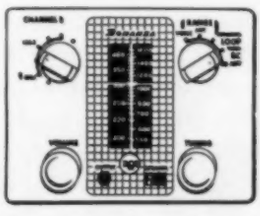
Faster Landing Gear Action — Both Up and Down!

The already quick action of the Bonanza's retractable tricycle landing gear has been speeded up even more. At 105 mph the gear lowers in 7½ seconds, goes up in 8½ seconds!



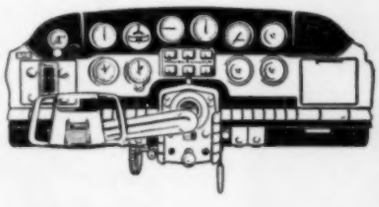
New Upholstery Combinations and Interior Designs

New combinations of blue, green and brown materials of warmth and beauty especially chosen to blend with the new range of exterior colors. Smart leather seat caps, new arm rests for all passengers.



New Radio Includes VHF Marker Beacon

The selection of the RCA 116 transceiver as standard equipment provides regular low-frequency operation for navigating four-course radio range, homing on range and standard broadcast stations; adds VHF channels.



New Instrument Panel Design, Safety-Type Wheel

New instrument panel design retains famous Bonanza operating convenience and efficiency, adds smarter-than-ever note to cabin appearance. And there's a new safety-type control wheel to match!

It has no equal in performance, speed, economy, strength, safety, style and comfort!

The new B35 Beechcraft Bonanza exceeds all promises for a speed-with-economy plane that's roomy, comfortable and easy to fly! New performance features at moderate horsepower add to its versatility and safety, hold operating and maintenance costs at a *business economy* level! New operating conveniences and luxury appointments plus scores of refinements call for a personal inspection because there's room here to show only a few. See it! Get all the facts! You'll agree this greater-than-ever Beechcraft Bonanza is a better-than-ever value!

Top speed, 184 mph
Cruising speed, 170 mph
Range, 750 miles
Fuel economy, 9.5 gph

Get all the facts! There are hundreds more — about the extra advantages of the new Model B35 Beechcraft Bonanza. Check with your nearest Beechcraft distributor or dealer, or write for complete information on your company letterhead to Beech Aircraft Corporation, Wichita, Kansas, U.S.A.

Beechcraft BONANZA

BEECHCRAFTS ARE THE AIR FLEET OF AMERICAN BUSINESS

What every pilot knows...
No matter what plane he flies, every pilot knows the importance of the fuel that powers it.
Over the years Phillips 66 Aviation Gasoline and Phillips 66 Engine Oils have earned the preference of an increasing number of private owners. Flyers who make their choice on the basis of time-tested quality rely on Phillips 66 Aviation Products for dependable performance. The Aviation Department, Phillips Petroleum Company, Bartlesville, Oklahoma.
Phillips
66
AVIATION PRODUCTS

FOOD FOR STARVING WILDLIFE IN PENNSYLVANIA has saved the lives of many deer herds. Piper Cub airplanes of the Aero Game Feeding Club are shown above preparing to take-off on a feeding mission. As much as 150,000 lbs. of corn on the cob has been dropped in a weekend, pilots scattering the grain from tree-top height to deer herds starving in deep snow from lack of vegetation.
—(Piper Aircraft Photo by Hal H. Harrison.)

AIR Report
Significant Trends and News

CESSNA 195's HAVE BEEN WITHDRAWN FROM PRODUCTION, the company deciding further purchases of new 300-hp. Jacobs engines would result in higher costs. Instead, engine purchases will be concentrated with Continental for its 240-hp. radial which powers the Cessna 190. Buyers can still obtain new Cessna 195A's by supplying their own surplus Jacobs engines. New Jacobs parts will continue to be available. . . 225-HP. RATING for 6-cylinder flat Continental engine has been obtained for use in the Beech Air Force YT-34 trainer.

TEMCO AND BEECH have received Air Force contracts for 3 single-engine trainers each, the Temco YT-35 being developed from the Swift and the Beech YT-34 being developed from the Bonanza. . . AERONCA WILL BUILD HELIOPLANE components to be assembled by Helio Aircraft of Norwood, Mass., which expects CAA certification this summer of its 4-place Helioplane and plans sales distribution.

PURCHASE OF 200-500 LIAISON PLANES by the Air Force for the Army Ground Force's artillery spotting is expected following Wright Field evaluations of many competitive models during April. Most lightplane manufacturers have entered the competition.

BIRMINGHAM'S NATIONAL AIR CARNIVAL will be revived May 20-21 under sponsorship of the Birmingham Aero Club and the new Birmingham Air Foundation, a non-profit undertaking. Funds will go to charities, with Spastic Aid of Alabama, Inc., specified as a major beneficiary. W. Hayden Brooks, long-time aviation leader of the South, is chairman.

J. R. GRAY of Dallas, North Central Texas Beech distributor, opened Gray Aircraft Service Co., Inc., in Hangar 9, Love Field, adjacent to Air Associates, to specialize in Beech service and parts. Heading the service department is Bruce Cox, Beech factory maintenance school graduate and former Lockheed mechanic and lineman, while R. G. (Bob) Wemple is establishing a full inventory of Beech parts and accessories. . . MERGER OF AIR ASSOCIATES AND SNYDER AIRCRAFT CORP. will result in the Chicago branch of Air Associates and Snyder's Chicago operation becoming one unit known as Snyder Aircraft Division of Air Associates. . . NEW FAIRCHILD SALES AND SERVICE MANAGER is Robert W. Kellhofer, for five years technical assistant to the chief of the Aircraft Section, Procurement Division, Air Materiel Command, with F. Kent Bradford promoted to assistant sales and service manager. General Manager Ben O. Howard said L. J. Povey, succeeded by Kellhofer, has become assistant customer relations director of the corporation. . . . ORCHIDS FOR SERVICE this month to Jackie Reed of J. D. Reed Company, who flew a Bonanza prop to owner Walter Wilson in Tamuin, Mexico, who damaged his prop while on Texas Private Fliers Association annual tour to Mexico. Flight had 55 airplanes, 180 pilots and passengers. . . W. CURREY SANDERS, North Louisiana Beechcraft sales and service operator, headed up the recent Louisiana Aviation Conference in Shreveport. . . . PRATT & WHITNEY CLINIC sponsored by Southwest Airmotive in Dallas last month drew private owners and executive pilots from a wide area.

4,906 Agricultural Planes

A CAA survey reveals there were 1,724 operators using 4,906 specially-equipped airplanes in dusting, spraying, fertilizing and seeding as of March 1 throughout all nine CAA regions. Operators manufacturing and installing this special equipment on planes for others totaled 227 in number and 19 operators were offering

(Continued on page 18)

Southern FLIGHT including MODERN AIRPORTS

APRIL, 1950 VOL. 33, NO. 4

COVER: New 1950 Navion 205 Deluxe with new Ryan color scheme. Note cream-colored tips on wings and tail surfaces.

Air Report— SIGNIFICANT TRENDS AND NEWS - - - - - - - 7
Just Among Ourselves— EDITORIALS - - - - - - - - - - 8
Pacing the Way to Acapulco— BY E. E. ISAACS - - - - - - 10
The Taylor Aerocar— BY TOM ASHLEY - - - - - - - - - 12
Somewhere To Go, Something To Do - - - - - - - - - 14
Midget Mixmaster - - - - - - - - - - - - - - - - - 16
Latest from the Factories on 1950-Model Lightplanes— COMPARATIVE TABLES - - - - - - - - - - - - - - - 20
Airmen's Calendar— COMING EVENTS - - - - - - - - - - 28
This Month's Modern Airport— BIG SPRING MUNICIPAL - - - 29
Questions and Answers for Airport Operators - - - - - 29
Veteran Air Pilots— BY JIM WHEELER - - - - - - - - - 31

GEORGE E. HADDAWAY, Editor-Publisher; TOM ASHLEY, Managing Editor; FRED N. STONES, JR., Business Manager; E. H. PICKERING, Research; L. M. ROBERTSON, Circulation Manager.

SOUTHERN FLIGHT, April, 1950. Vol. 33, No. 4. Published monthly. Publication office, P. O. Box 750 (1901 McKinney Ave.), Dallas 1, Texas. Price 35c single copy. Subscription rates: United States, one year $3.00; two years, $4.00; three years, $5.00. Established February, 1934. Entered as second-class matter at the Post Office, Dallas, under the act of March 3, 1879. Copyright, 1950, by Air Review Publishing Corporation.

Just among ourselves

EDITORIALS

REALISTIC FLIGHT ASSISTANCE

A VERY recent analysis of non-air carrier accidents reveals a healthy drop in the stall-spin category but an alarming increase in the number of fatal accidents due to weather. It is generally conceded that the principal reasons for these definite trends are the elimination of spin requirements for a private pilot certificate, plus the increase in the number of spin-resistant airplanes, accounting for the drop in stall-spin accidents, and the terrific increase in cross-country use of aircraft accounting for the corresponding increase in serious and fatal accidents due to bad weather.

Every person conscientiously concerned with the pathetically slow acceptance of air travel by the majority of our citizens simply can not accept the present accident rate in non-air carrier aviation. Such figures as more than 5,000 fatalities since the end of the war, or one fatality for every 200 airplanes in the nation during 1948, can not be lightly brushed aside or ignored. The headlines are kicking hell out of the old aviation pocketbook. Apathy of both industry and government toward this tough nut is reflected most sharply in the year-by-year decline in personal aircraft sales to the pitifully low figure of 3,400 units in 1949.

What can be done about it? We believe that plenty can be done about it. We believe that the accident rate can be cut in half in a year's time if we put a little action and realistic, practical thinking on the problem. More regulation is the last thing we need. CAA policemen are not the answer.

Since we are now passing out of the Sunday-driver, airport circling type of flying and entering the age of increased aircraft utility through cross-country flying, we had better produce more competent cross-country pilots, bearing down on flight planning, actual cross-country instruction, map reading, experience on strange airports, and especially familiarity with radio and weather recognition. You don't have to reinstate a lot of the former theoretical eye-wash and adiabatic lapse rate malarky to indoctrinate the new crop of pilots with a few simple fundamentals of safe flying practices or to provide familiarity with the expensive flying aids and assistance available for the asking.

Already there are some healthy signs pointing to effective work along this line, especially by CAA communications and aviation development personnel out in the field. For example, out in one region communications personnel have developed a flight information area board which contains every facility and airport in the area. Each hour the communicator indicates beside the call letters or identifications of the facilities in his area the essential items of weather, wind direction and velocity, ceiling, sky condition, visibility, obstructions to vision and altimeter setting. They have small hooks beside each identification upon which is placed a colored tab indicating the abnormalities of any visual or radio aids, or any field conditions of a hazardous nature. When all known weather data is posted, the communicator indicates the turbulent areas, the precipitation areas and the best altitude for flight from all directions within his particular area.

He studies the conditions so that he can advise aircraft in simple, direct terms, by looking at a veritable picture and, avoiding technical gobbledegook, will say something like this: *"It's raining north and east of your flight, with a turbulent area westerly, moving southwesterly across your flight path. A heading of such-and-such degrees will enable you to miss this area. It also appears that your best altitude on this heading is at 5,000 feet since the wind direction is such-and-such and the velocity is about 23 miles (not knots!) per hour."*

Reports from other transient pilots flying in the area can keep the information on the board even more up-to-the-minute. It's an excellent idea and one that demands serious consideration for universal adoption. However, it is probably too simple and practical for immediate acceptance. Since it wouldn't cost a million dollars to activate, it probably will be ignored for a year or so.

Another recommendation we favor is the one that suggests the title of "Aircraft Communicators" be changed to "Flight Assistant Specialists." The Interstate Airways Communications Station would be known instead as the "Flight Assistance Office." The flight assistance program was established in 1945 by the CAA, whose personnel had to become proficient in meteorology, navigation, civil air regulations (air traffic rules) and communications procedures and techniques which emphasized search and rescue and other emergency measures. These important people must also be experts on topography and aerial markings as well as completely familiar with all airports, facilities and activities in their particular area. Let's call them what they are and hang up a sign everybody can recognize.

It is a well known fact that the average private pilot actually avoids radio contact. He has not been taught how to use his radio. He's scared and embarrassed to use it. He thinks he has to be a bi-lingual graduate of the "Roger-Wilco" school in order to pick up his mike and start talking. This situation can be changed now.

Another group of enterprising CAA personnel in still another region have developed a large, portable display board in map form which contains all radio aids over several states and is wired for sound so that two communicators can simulate actual two-way conversations with a diminutive airplane as it progresses across the face of the map, demonstrating both

(Continued on page 24)

Smart Buys

CLIP OUT...FILL IN...AND MAIL TODAY

MAP CLUB

Item A — Join the famous SAC "Map of the Month Club." As your maps become obsolete, SAC automatically sends you new ones corrected by U. S. Coast & Geodetic Survey. Only charge, 25c per map, plus cost of mailing.

COURSE & MILE GAGE

Item B — Jimmy Mattern Course and Mile Gage. Simple, easy to use. A real aid to cross-country flying. **3.45**

CONTINENTAL MANUAL

Item C — Continental "E" series maintenance and overhaul manual . . **3.00**

Item D — Continental "C" series parts catalog. **1.00**

OZIUM AIR-CONDITIONER

Item E — Clear air inside plane instantly! Use at home to fight infection from airborne germs and virus. Pleasant, clean odor. Chrome-plated dispenser about size of small flashlight. Sprays under pressure at press of thumb. With 24 Ozium pressure-packed glycolized refills. **12.50**

THERMOS BOTTLES

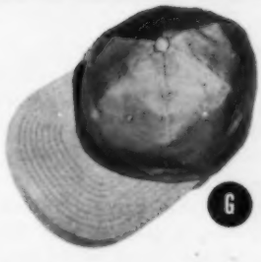
Item F—Finest aircraft thermos bottle on the market. Will last a lifetime. Both hot and cold beverages.

2-quart capacity **28.00**

Extra fillers **5.00**

FLYING CAPS

Item G — Pace-setter in *long*-visored flying caps. Suitable for all sports. Suntan, red, white **1.50**



SUN GLASSES

Item H — Bausch & Lomb and Ray-Ban sun glasses (gradient density). **9.50**

SOUTHWEST AIRMOTIVE COMPANY
SALES DEPARTMENT
LOVE FIELD, DALLAS, TEXAS

Please send me the following:

ITEM A: Area interested in_____
Kind of maps_____
ITEM B: Quantity_____
ITEM C: Quantity_____
ITEM D: Quantity_____
ITEM E: Quantity_____
ITEM F: Quantity_____ Extra Fillers_____
ITEM G: Quantity_____ Color_____ Size_____
ITEM H: Quantity_____

☐ CHECK ☐ C. O. D. ☐ CHARGE

Name_____

Address_____

City_____ State_____

"THE FLAT RATE COMPANY"

Southwest Airmotive Co.

CAA Approved Repair Station No. 195 | LOVE FIELD DALLAS

Pacing the Way to Acapulco

A little airplane provides big surprises on annual Kansas Flying Farmers flight to Mexico

By E. E. ISAACS

WE had no doubts about the new Piper Pacer carrying our load of four with baggage. But we were genuinely surprised to find it would carry us all the way from Kansas to Acapulco, Mexico, and back with consistent 125-mph. or better cruising speeds and impressive short-field characteristics at high-altitude and hot-weather airports in Mexico.

Our start was delayed while we went to the factory at Lock Haven to pick up the new Pacer 125, a 1950 model with a Lycoming which turns up 125 hp. at 2,600 rpm. When we finally left Ken-Mar Airpark in Wichita, Kansas, which is our headquarters as Piper distributor, it was 2 p. m. and one day later than our original schedule.

We were loaded, all right. With the wife and me were two guests, Art and Bessie Fry, and baggage for all four—enough for 12 days. They are a couple of flying farmers from Little River, Kansas. Art has his own airplane but we wanted to go all together in the Pacer. He is 60 years old, got his private ticket last year, and does a good job of flying in and out of his 1,100-ft. alfalfa strip back home. Did someone say flying is only a young man's game?

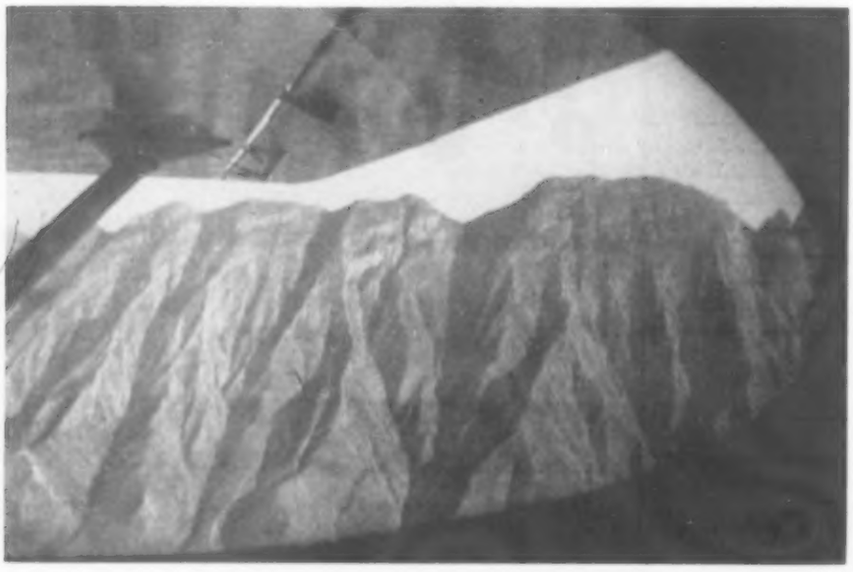
We four were participants in the Second Annual Kansas Flying Farmers Flight to Mexico—a great flying entourage of 150 people in private planes. But the rest of the pack had a head start. Despite a 20-mile headwind, the Pacer got us out of Wichita and down to Lawton, Oklahoma, for a night stop after arriving before sundown. One of the fellows at the airport took us into town and arranged very nice hotel accommodations and after dinner, Art and Bessie taught us a bit about Canasta. Three games—then for some sleep.

We got off to an early start a little before 8 a. m. and I flew a little West of our course to get around some weather. The Pacer was really scatting along with full gas tanks and our load right up to gross. At 4,000 ft. and with 2,400 rpm., it was indicating 120 to 122 mph.—a comfortable 127 mph. corrected for altitude. The little Lycoming was taking it easy and smoothly and we found the noise level was such that conversation between front and rear seats was normal without need for shouting. It was cold, but cabin heat outlets in both front and rear cabins kept us comfortable without coats. This was really something, we all agreed—just sitting up there comfortably relaxed, waiting for airports to sail by underneath while the Pacer did all the work for us.

150 Flying Farmers on Mexico Flight

After sitting out some weather at Abilene for a couple of hours, we bend our course slightly, flying by Bandera in the Texas hill country. Suddenly we break out into bright, hot sunshine for our entry to Laredo and a quick clearance through Customs. Before the afternoon is very old we're circling beautiful Monterrey and joining up with the Kansas flight party at the hotel. Big sunflowers on lapels and dresses are all over the place and it looks more like Kansas than Mexico. At the official banquet that night, Governor Carlson of Kansas has to prove he is a farmer by milking a goat led into the dining room by Mrs. Carlson, with the Flying Farmers' Bill Janssen of McPherson, president, and Sonny Neel of Little River, trip chairman, leading the laughs.

This is private flying at its best—150 Kansas farmers flying privately-owned airplanes down to Monterrey and having the time of their lives. With only a few exceptions, we are mostly man-and-wife teams and in some cases the children are along, too. Yes, when the family gets behind something, it really starts to develop and expand. That's what is happening



Shortly after leaving Monterrey for Mexico City, Art began snapping pictures of the granite mountain walls as we flew down a valley at 9,000 ft.

Kansas Flying Farmers mopped up with sailfish catches at Acapulco. Here are two specimens "mounted" on the nose of our Pacer 125 for snapshot purposes, with Trip Chairman Sonny Neel and his wife posing for me. In the picture below, left to right, are Neel, the author, and Bill Janssen, president of Kansas Flying Farmers.

to aviation through the Flying Farmers.

Not all of the pleasure of this annual January excursion is found on the flight from Kansas to Monterrey. At that beautiful city the party split into two or more groups. One went to Acapulco, utilizing packaged airline tours. This is a wonderful arrangement. The entire "package", including the stay in Monterrey, the airline trip to Acapulco and return, hotels and meals both in Monterrey and in Acapulco, was set up at a total cost of only $121 per person.

We four in the Pacer decided not to join the airline junket, however, because we wanted to see how the new Pacer handled. So we went the whole way with our loaded little Piper. Another couple decided to do the same in their 2-place Luscombe. They got off a little ahead of us. Finally gassed after a long delay, we climb to 9,000-ft. cruising altitude and follow a valley between two mountain

(Continued on page 26)

The Taylor Aerocar

An experimental flying auto with many unconventional features, including CAA procedure

By TOM ASHLEY

FLIGHT and road tests of the "Aerocar," an experimental 2-place flying automobile, have been resumed at Longview, Washington, following snow, ice and rain interruptions during the Winter. It is one of two experimentals now active in the U. S., in the quest for practical methods to combine road and air transportation in a single machine. The other is the "Airphibian," recently described in these columns and for which production facilities are nearing completion at Danbury, Connecticut, pending the CAA certification which its designer, Robert E. Fulton, Jr., expects soon.

Unlike the Connecticut craft, which is a tractor, the experimental Aerocar of the Northwest is a pusher, its propeller being mounted "mixmaster" fashion behind the tail, as shown in the accompanying photographs. A 2-seater with 2-control, it grosses about 1,750 lbs., and has an empty weight of about 1,250 lbs. This empty weight is described as including 912 lbs. for the auto and about 340 lbs. for the wing, tail and tail boom (which includes propeller and its drive shaft). Wing loading is figured at about 10.4 lbs. per sq. ft., and power loading at about 17.5 lbs. per hp. for its 100-hp. Franklin engine. A 125-hp. engine will also be tested in it.

Performance is said by Molt Taylor, designer, to include 100-mph. cruising speed and 53-mph. landing speed as an airplane and design road speed of 50 mph. (using 30 hp. from the Franklin) as an auto. Fuel capacity of 18 gals. for about 300-mile cruising range in the air and over 500 miles of road travel is provided.

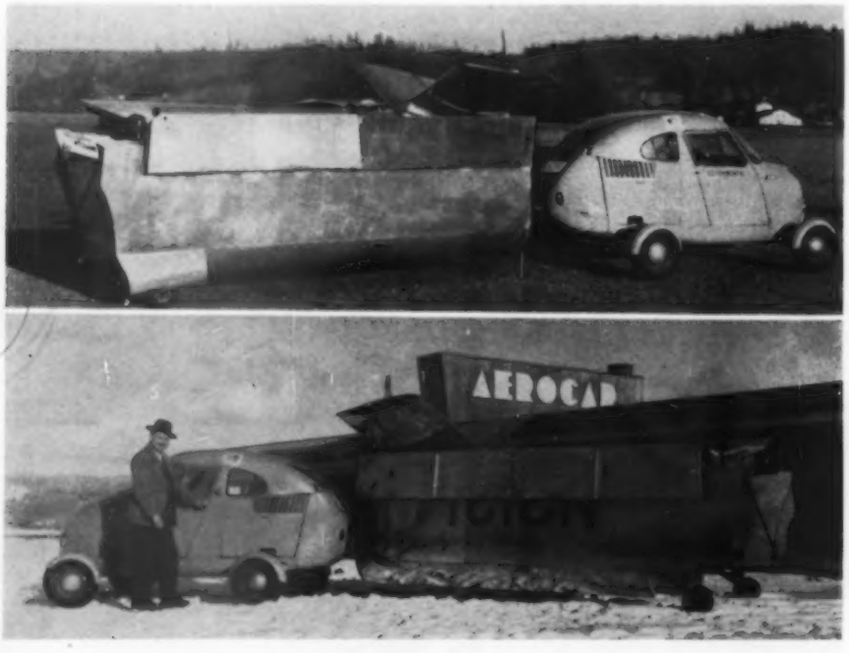
Designer Taylor emphasizes that his experimental is a flying automobile—not a roadable airplane. "It is practical for a trip to the drugstore, to the office, shopping or for driving to and from the airport—a complete, unimpaired automobile in every sense of the word," he emphasizes.

"However, we have been able to provide for this automobile an accessory which, when attached, converts the auto into a practical airplane for flying. This accessory has further been made roadable. It is in the form of a trailer, so that after landing at an airport, you may take the wings, tail and propeller along behind the car instead of leaving them at the airport. This trailer can be parked at home in the garage to eliminate hangar rent. Or, if you land at a distant airport and want to run downtown, it can be left at the airport if you prefer not to tow it along as a trailer. If you are grounded by weather, you fold the wings and tail and tow them behind the car as you drive to your destination or to nearby good weather conditions where you can resume flight.

"These changes can be accomplished in a couple of minutes by a woman in her high heels, fur coat and gloves—without tools, hoists or assistance."

All of which sounds as if Molt Taylor had hit the jackpot. But there are still some major problems. Even so, he says, "We feel the present Aerocar certainly is a definite beginning and, as with the Model T, we hope it will prove to be the start of a new industry which one day will provide an air vehicle with the combined characteristics of a Cadillac and a Bonanza. In the meantime, its Crosley-Ercoupe characteristics can be utilized by quite a few people."

There are great odds against the successful marketing of new-type lightplanes from experimental projects such as the Aerocar. Handicaps include the perfection and CAA certification



Flight section of Aerocar is towed as a trailer on the ground after wings are folded alongside tail section. Trailer wheels are retracted into wing leading edge in flight. Designer says one person can do conversion quickly without assistance.

—(Aerocar Photos.)

Take-off shot shows recent test flight at Longview, Washington. Pusher propeller is located behind tail. Drive shaft from 100-hp. Franklin engine was made by large manufacturer of automotive drive shafts and weighs 30 lbs. Propeller remains on shaft when flight section is folded as a trailer.
—(Aerocar Photo.)

of the product itself; financing of production facilities and supplies; sales and distribution operations, and customer service following the sale. These keep established manufacturers concerned with many problems other than design and mechanical headaches. Molt Taylor is still in the early stages of development, having a long way to go before becoming involved in most of the problems. But he says he recognizes what's ahead and is still confident that he is on the right track.

One problem has already been eased by the CAA. It is type certification, which could prove difficult in view of the fact that existing certification requirements do not apply to "flying automobiles" and the formulation of special requirements could lead to many puzzles. "We have found the CAA to be unusually cooperative," Taylor says. "They are giving every assistance. They have relaxed the requirement for an Approved Type Certificate sufficiently to permit us to build and sell a limited number of demonstration machines for service test, evaluation, demonstration and promotion.

"This CAA cooperation is something really new and marks us as being the first to be told to go out and cut our own throats if we want to. They have told us in so many words it is sink or swim for us and that we are on our own. They will help us but will not do anything to save us if we get into trouble. In other words, if we are willing to tell the customer what he can and cannot do with his Aerocar and he then buys it, the whole deal is between us and the customer. This is what we asked for and they gave it to us, letting us serve as the guinea-pigs to see what would happen.

"Incidentally, we are finding road requirements to be more exacting than air requirements. Things that stand up under the most strenuous tests for air operation begin to show up after several weeks of road running. We are really learning it the hard way."

We asked Taylor why he became involved in the "mixmaster" pusher propeller, with its shafting problems. Here's his answer: "We had nothing in the way of fixed ideas to hinder our concept in designing the Aerocar. We did things like having the prop on the tail strictly against convention but for the very practical reason that we think that is the proper place for it. Whoever saw a prop on the front of a boat? Similarly, there are few autos or boats that don't drive through shafts and I can assure you that the shaft in the Aerocar hasn't given us a moment's trouble since it was installed. It was designed by Spicer, who has built many thousands of them for the auto business that turned faster and carried more power, and they did it for 30 lbs. which is the penalty we have to pay for having the prop out of the way where it is safe, where we don't have any slipstream to contend with, where the noise is reduced, where it is automatically removed during the change-over and all this is foolproof, simple, straightforward and practical. The 30 lbs. is the only drawback and that is part of the compromise involved in trying to drive and fly the same vehicle. We have certainly designed to satisfy the needs of the vehicle—not to please either the orthodox pilot or auto owner. Thus the unconventionality."

Molt Taylor's answer is a good example of his confidence in the design. He is the first one of our knowledge to experiment with a long propeller drive shaft on a lightplane and not become involved in a lot of problems such as excessive weight, vibration and shaft failure of some kind. We also mentioned the problems of power transmission for the auto, clutches and gears and control disconnects and fittings. "These things are questions to you and the public because their solution is not common practice or knowledge," he replied. "All I can say at this stage is that we have those problems well in hand and are demonstrating this fact to the satisfaction of CAA."

We hope Taylor is as successful as he appears to be and we look forward

(Continued on page 22)

First man on the beach is Ivan Mangold (left). Pretty Jan Warrick (above) loses no time to start surf casting.

Somewhere t

WHETHER you are a flying businessman, a Sunday pilot or a student, most of your flying is a routine proposition. But the chances are that you can use a suggestion or two when it comes to trying to depart from routine, such as getting the most out of your flying on a pleasure junket. Our advice is to corral your flying friends or, if you're a student, put the pressure on your instructor, and organize a flight party to get out and go places—a breakfast flight, a visit to a neighboring city, a swimming or fishing junket to some lake or beach, a weekend at a resort or an extended cross-country tour.

Members of the San Antonio chapter of the Texas Private Fliers Association have been doing this on a regular schedule. One of their recent junkets took them only 135 miles to a broad beach on Matagorda Island just off-shore on the Gulf of Mexico. A big pot, a pound of coffee, a jug of fresh water, sandwiches or the fixin's, fishing tackle—they carried their own gear for food and fun. First man on the sand takes off his shirt and drapes it over the propeller for use as a windsock as other planes approach for the landing, following signals guiding them to the smoothest section of the

While others are swimming or fishing, Ann Witbeck and friends gather driftwood and build fire to make a big pot of coffee. Fish below are exhibited by Dick Penney and Ira Harvey.

—(San Antonio Express Photos by Bob Bain.)

e to Go, Something to Do

beach. As each plane lands, Secretary Ann Witbeck scurries up with a register to check everybody in. Then it's fishing, swimming, fun in the sand, lunch and a good time by all until time to start home well before dusk.

Have *you* been anywhere lately?

Get up and go—and take your friends. Flying itself is enjoyable, but you'll get more out of it with somewhere to go and something to do. ★ ★ ★

Mr. and Mrs. Gene Norris and their Cessna (right). Below are Glenn Smith, Mrs. Frank Masters and Mr. and Mrs. Tex Anderson.

Midget Mixmaster

Hard luck kept this novel pusher out of the Miami races but its builders are confident they have a contender

MOST radical midget racer yet developed to compete in the category for engines of 190 cu. in. displacement (85 hp.) is the unique PAR Special, designed, built and flown by four McDonnell Aircraft workers in St. Louis. The name "PAR" stands for "Parks Alumni Racebuilders"—a kind of tribute paid by the builders to Parks Air College, where they learned their aeronautics. They are George Owl, Robert Short, Errol Painter and Arthur Beckington.

The racer is a mixmaster pusher, with its C-85 Continental driving an extended propeller shaft. The prop is mounted behind the craft's "Y" tail and most of the test flying to date has been to perfect the propeller shafting arrangement. Empty weight is high as midget racers go, being 640 lbs., or about 100 lbs. or so over money-winning designs. However, the PAR Special's other innovations give it superiority in some drag-reducing details over orthodox designs. These include use of tandem landing gear wheels located in the belly where they are efficiently streamlined into the fuselage to reduce drag.

Use of the "buried" engine installation reduces frontal area drag and the designers have also equipped the little 4-cylinder with exhaust augmentor tubes along the lines of the Convair 240 and the new experimental Beech Model 50 Twin Bonanza. Another innovation is the use of a variable incidence wing to adjust angle of incidence in flight. This incidence angle can be set to cover positions from .5 degrees to 13.5 degrees. The wing itself has an area of 67 sq. ft., with a 20-ft. span. Its root chord is 55 ins. and tip chord is 25 ins., using an NACA 23012 root airfoil and an NACA 23009 tip airfoil.

"This wing has a continuous single spar with plywood leading edge covering which runs from tip to tip," George Owl says. "Two incidence hinge fittings are located on the aft face of the spar. A screw jack of our own design is used to connect a fitting at the wing's leading edge to a fitting on the fuselage. This screw jack is cable operated, is double acting, and has double lead threads. The only difficulty we have encountered is friction, but the system is very light and seems to work okay in actual use. We are convinced that variable incidence gives better take-off than equivalent flaps because of much lower drag.

"Other features of interest on the PAR Special include the steerable front wheel; hydraulic brakes on both wheels; elevator trim bungee connected to the wing change mechanism to maintain trim during incidence change, and roller skate wing-tip wheels. The performance is very promising and with the correct propeller, detailed cleanup and a good surface finish we expect to do well."

Engineering estimates of its maximum speed are placed at 214 to 234 mph., depending on efficiency achieved with cooling drag and propeller thrust. Its builders estimate they will eventually be able to average 190 to 195 mph. on a 2-mi. pylon course. This estimate places the PAR Special only slightly in front of the best speeds yet attained by 190-cu. in. racers at Cleveland and Miami, and such a narrow edge would indicate that its victory would be decided mostly at the take-off and by pilot skill on the turns.

"Take-off and landing speeds and distances depend on incidence settings," Owl says. "They are about the same as most other racers, but no torque effect is experienced on take-off. Rate of climb and actual top speed are not known. The prop we've been using is too low pitched, so we have never had the engine wide open in level flight. When we flew it in Miami before the races, the PAR Special did only 150 mph. around the pylons—but we were using only part throttle and taking the turns wide because the

Small wheels on wing tips are required by use of tandem main wheels in belly.

PAR SPECIAL

Weights

Empty, lbs.	640
Gross, lbs.	900

Wing

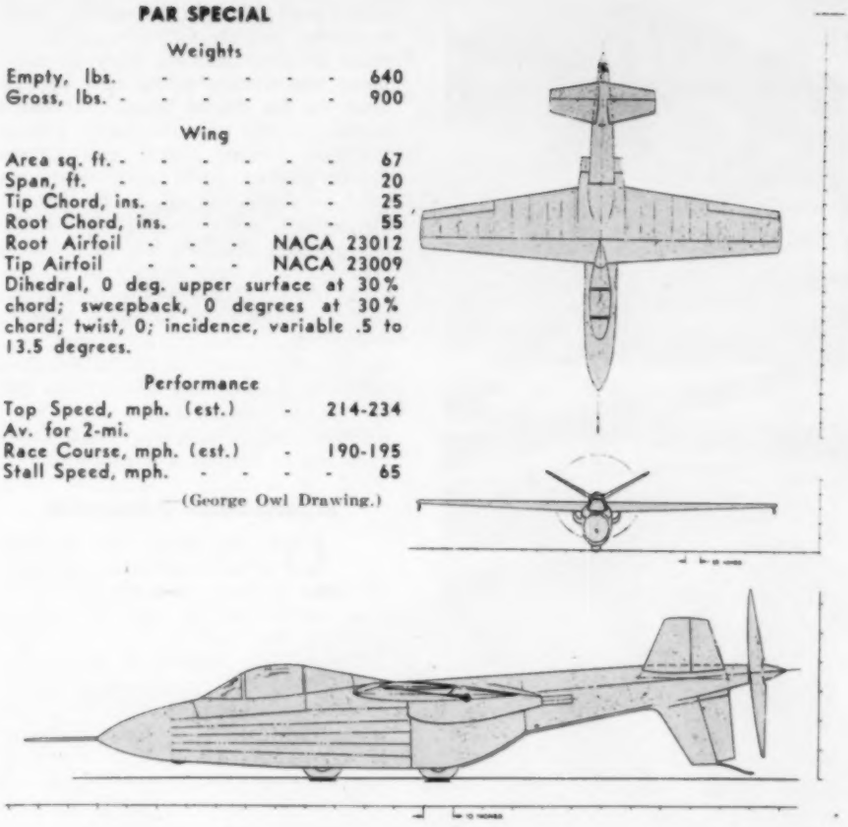
Area sq. ft.	67
Span, ft.	20
Tip Chord, ins.	25
Root Chord, ins.	55
Root Airfoil	NACA 23012
Tip Airfoil	NACA 23009

Dihedral, 0 deg. upper surface at 30% chord; sweepback, 0 degrees at 30% chord; twist, 0; incidence, variable .5 to 13.5 degrees.

Performance

Top Speed, mph. (est.) Av. for 2-mi.	214-234
Race Course, mph. (est.)	190-195
Stall Speed, mph.	65

—(George Owl Drawing.)



flight was for race familiarization only. A failure in the spars of both stabilizers kept us out of competition at Miami. We're investigating the cause and will install new all-metal stabilizers for the next flight.

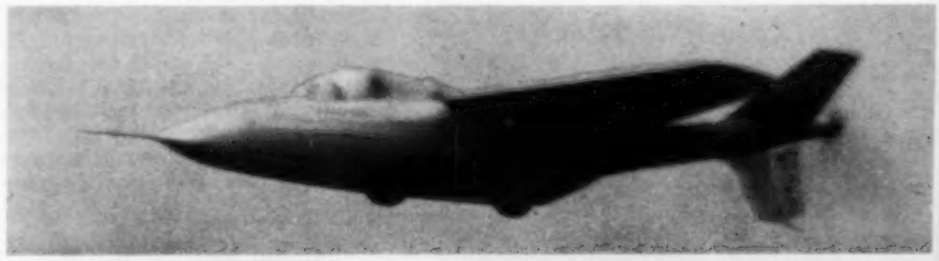
"Stalls are straight ahead, with no roll and rather gentle pitch. The stall is best described as being similar to that of the F-51. Stability in flight is good, trim is okay and we have very good control. Our racer does nice aileron rolls."

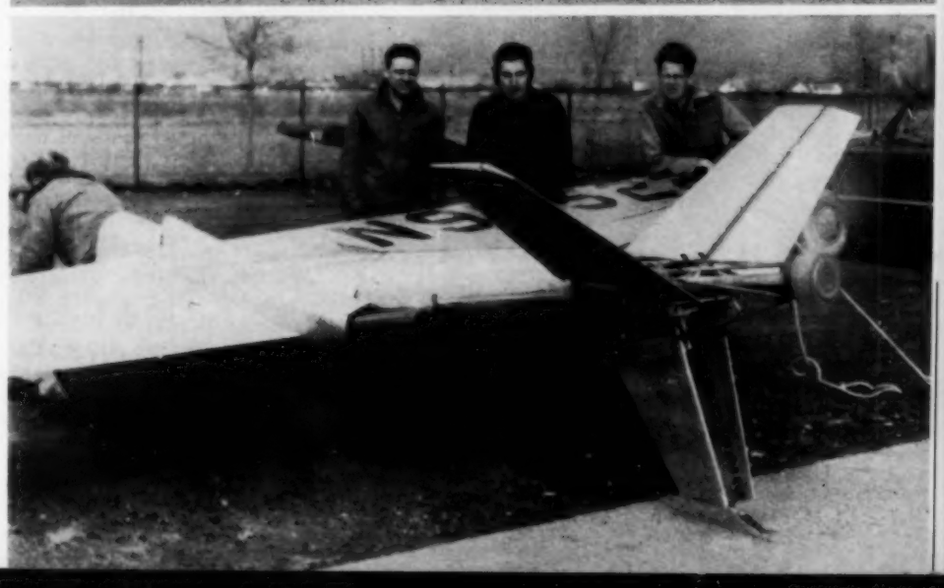
When people ask the builders why they decided on such a radical design, here's the answer they get: "Our design gets away from two major drag items—landing gear drag and turbulent flow over the fuselage and tail. The price paid for these improvements is a weight increase and possibly some loss in propeller efficiency.

"Housing the wheels within the fuselage dictated the pusher propeller arrangement, which in turn eliminated the slip-stream drag. The low flat attitude of the airplane on the ground and the propeller behind the tail dictated the necessity of increasing wing lift for take-off and landing. We investigated three possible solutions to this problem — variable incidence, powerful flaps and raising the propeller during take-off. Wing incidence seemed the most promising."

Hard luck and bad breaks have plagued the experimenters. Last month's announcement by Goodyear that it will no longer sponsor the $25,000 Cleveland event for midgets has failed to discourage the builders, and they're going after a solution for spar difficulties. "We expect some sponsor will come through for Cleveland races," says Owl, "but in any event we are going to continue test flights until we perfect the design. Incidentally, we believe we have an excellent chance of setting a new world's speed record for this class of airplane over a 100 kilometer course and would like to find a sponsor for the attempt."

Although it didn't race, the PAR Special was a feature attraction at the 1950 Miami event. Steve Wittman, leading midget money-winner from Oshkosh, Wisconsin, won the Continental Trophy in his "Bonzo" with 185.4-mph. — a new Miami midget record. Second place went to Keith Sorenson of La Crescenta, California, with 182.04-mph. in his Cosmic Wind, and Bob Downey of Whittier, California, was third with 181.33-mph. The Gulf Oil international aerobatic championship was won by Rodney Jocelyn of Langhorne, Pennsylvania, in a Kinner-powered Great Lakes. A Frenchman, Fred Nicole, demonstrated the Fouga Cyclone, a sailplane with a jet engine of about 200 hp. ★ ★ ★





Flight photo was made before spar failure in stabilizers prevented PAR Special from racing at Miami. Note installation of propeller and drive shaft (below), use of exhaust augmentor tubes for improved cooling and probably extra thrust.
—(McDonnell Aircraft Photos.)

CESSNA 170 CROP SPRAYER is offered by Yingling Aircraft at Wichita, Kansas, and, as shown here, features easily removable units including screw-in nozzles carried on internal boom and along struts. Cabin tank of 85-gal. capacity is also quickly removable, as is secondary panel containing spray control, pressure relief valve and spray pressure gauge. Engine-driven pump is used. Tests show compact, 60-ft. swath at 10 ft. above ground.

AIR REPORT

(Continued from page 7)

flight courses in industrial aviation other than to their own personnel. A breakdown shows sprayers outnumbered dusters 1,976 to 1,064, while 1,793 planes were equipped for a combination of operations. Fifty-eight planes were used for seeding only and 15 for fertilizing only. More than half of all specialized agricultural airplanes are in the medium category, 2,601 of them grossing 1,500 to 5,000 lbs. Light planes, grossing up to 1,500 lbs., total 2,217 in number. Only 25 gross over 5,000 lbs. Total number of helicopters in agricultural work is 63 —32 of them are equipped for combination work, 20 for dusting only, 9 for spraying only and 2 for seeding only. Incidentally, the CAA's list of agricultural airplanes includes two aircraft used as "fish seeders." These "plant" fingerlings from mid-air by aerial drops to re-stock lakes and streams.

FIRST MARTIN 202 FOR TWA is inspected by TWA President Ralph Damon at Glenn L. Martin factory, which is leasing 12 of the craft to TWA. Damon is also buying 40 new Martin 404's.
—(Glenn L. Martin Photo.)

Defense Area Flight Plans

Recent official warnings about civilian flights near restricted defense areas may have confused some pilots. Prohibited areas over atomic projects are really restricted by law and must not be flown over, but there has been no return to the mandatory flight plan policy adopted after Pearl Harbor. You don't have to file flight plans but you are encouraged to do so. Perimeter defense areas eventually will include the East Coast, West Coast, Canadian Border and three inland areas, namely, Oak Ridge, Hanford and Los Alamos atomic energy plants. Only two of these are now activated, the area seaward of a line 20 miles off the East Coast from a point near Norfolk, Virginia, north to border, and the Los Alamos atomic plant in New Mexico. Only in these areas are civilian pilots now encouraged to file flight plans. Within a radius of 150 nautical miles around the Los Alamos plant, civil airmen flying above 10,000 feet mean sea level, or 4,000 feet above the immediate terrain, whichever is the higher, are encouraged but not required to file. Actually, any return to mandatory flight plans would accomplish little in the way of security. While a flight plan facilitates radar and fighter patrols, a "hostile" aircraft at large in this country would have only to call the nearest radio and identify itself through spurious registration numbers to submit a flight plan.

Million-Dollar Navigation

ON the same day recently, DC-4's operated by three different airlines took off from Gander, Newfoundland, and all headed non-stop for London.

Plane "A" charted a rhumb line course with a single heading and located more southerly than the great circle and intended to take advantage of a low pressure area en route. Its forecast flight time was 9 hrs. 31 mins.

Plane "B" selected the great circle with a series of headings to cover the shortest distance between take-off and landing. Its forecast flight time was 9 hrs. 11 mins.

Plane "C" decided to use the "average drift" method of navigating the great circle with a series of headings. Its estimated flight time was 9 hrs. 1 min.

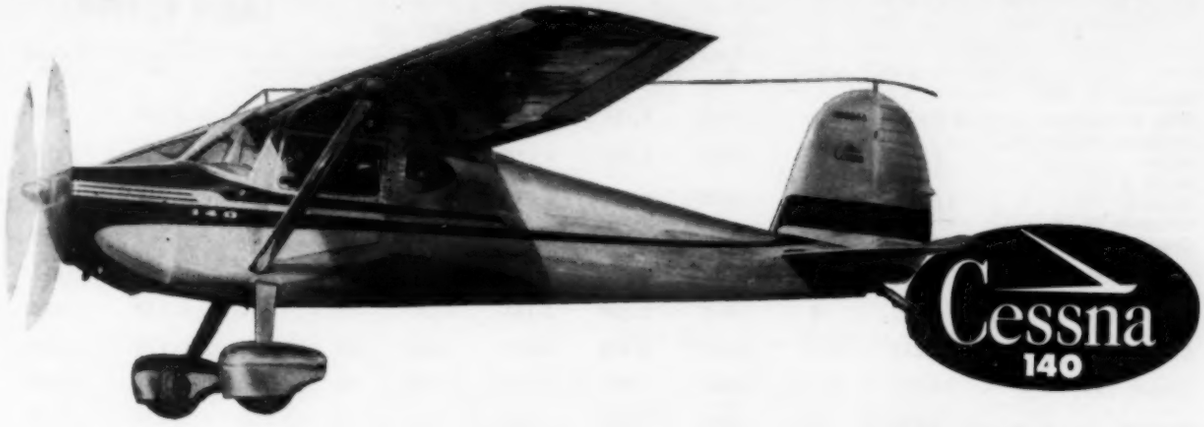
In London, here's how the actual flights were logged at their completion: Plane A, 10 hrs. 12 mins. Plane B, 9 hrs. 15 mins. Plane C, 8 hrs. 38 mins.

Plane C, which bested the other two by 37 mins., was a Pan American Airways DC-4 navigated by an "average drift" method worked out by PAA Senior Meteorologist Lyle E. Brosche. Following data from his research, including a sketch of an upper air chart showing weather conditions projected for the flight, the DC-4 crew allowed their ship to drift with beam winds instead of bucking them.

Average correction for drift is computed according to tables worked out by the company meteorologist, who calculates the algebraic sum of the beam winds to be encountered throughout each flight. This correction is then applied to the great circle headings and occasionally it is applied to a series of dog legs (two or more great circle routes). To guard against compass errors or pressure variations from the forecast, the navigator maintains a constant check of actual position by radio or celestial fixes at regular intervals; radio altimeter readings provide a running check on actual pressure conditions encountered. The

(Continued on page 21)

★ SEE THE NEW 1950 CESSNAS—NOW AT YOUR CESSNA DEALER'S ★



Cessna "All-Metal Engineering"

BRINGS YOU TODAY'S GREATEST 2-PLACE AND 4-PLACE VALUES!

CESSNA 140: A roomy, 2-place, *all-metal*, cross-country plane . . . now even more beautiful and more comfortable. New, comfort-engineered seats—even better visibility—less cabin noise.

Compare this new Cessna 140 with *any other* 2-place plane . . . *on any basis*. For example, efficiency formulas all over the country show it delivers more miles per gallon—more speed—more range. Try it yourself on a tough traveling schedule. You'll discover that on an average 1000-mile trip in the U. S. your Cessna 140 will be within an hour of the DC3 airline schedule. And you'll be able to go *where* you want *when* you want . . . to arrange your schedule to suit yourself.

Can your business afford not to buy the money-saving transportation—the extra convenience and comfort—the extra mobility this new Cessna 140 offers? ARRANGE TODAY FOR A PRACTICAL TEST. Your nearest Cessna dealer will be glad to help you.

CESSNA 170: The famous "Family Car of the Air" . . . With new streamlining, new convenience, new comfort! Luxurious interiors with plenty of room for *four* large men and their luggage.

Analyze what this airplane will do for you and your business: Over 120 m.p.h. cruising speed! Over 500 miles comfortable range on a filling of gasoline. (You'll get over 15 miles per gallon—and you can go that mileage-saving direct route.) You and your men can go *where* you want—*when* you want—FAST! And you can take associates and customers with you. What would this be worth to your company in a month, or a year? Why not arrange for a practical test with your Cessna Dealer? This new Cessna 170 costs literally thousands of dollars less than any other 4-place, all-metal plane on the market!

THERE'S A CESSNA THAT FITS YOU *AND* YOUR POCKETBOOK!
Arrange Today for a Practical Test

ALSO SEE the Cessna 190 and 195 . . . 4 to 5-place personal airliners with every safety and comfort feature—yet surprisingly economical to own and operate. *All-metal* . . . airline-type engines . . . the most luxurious personal plane built today. Larger, more luxurious cabin—more capacity, more speed, more range! See and try a 190 series Cessna yourself.

See Your Nearest Cessna Dealer or
USE THIS COUPON

Cessna Aircraft Co., Dept. SF-1, Wichita, Kansas

Please send free literature giving complete description of the Cessna 140 ( ), Cessna 170 ( ), Cessna 190, 195 ( ), Literature for model builders ( ).

Name.....

Street.....

City.....County.....

State.....Phone No.....

LATEST FROM THE FACTORIES ON 1950-MODEL LI

(April 1, 1950)

	Price	Seating	T. O. Hp.	Gross lbs.	Empty lbs.	Useful lbs.	Fuel gals.	Range mi	Top mph.	Cruising mph.	Landing mph.	Rate Climb mph.	Span ft./in.
Aeronca 7EC Champion	$ 2,695	2	90C	1,450	890	560	18.5	351	110	100	44	800	35/2
Aeronca 15AC Sedan	4,848	4	145C	2,050	1,150	900	36	456	129	114	53	800	37/6
Beech B-35 Bonanza	11,975	4	196C	2,650	1,575	1,075	40	750	184	170	56	890	32/10
Bellanca 14-19 Cruisemaster	9,500	4	190L	2,600	1,525	1,075	40	680	187	180	43.6	1,400	34/1
Cessna 140	3,695	2	90C	1,500	900	600	25	450	125	110	41	690	33/4
Cessna 170	5,995	4	145C	2,200	1,185	1,015	42	450	140	120	55	690	36
Cessna 190	13,250	4–5	240C	3,350	2,015	1,335	80	750	170	160	62.5	1,050	36/2
Cessna 195	14,950	4–5	300J	3,350	2,030	1,320	80	750	180	165	62.5	1,200	36/2
Ercoupe	3,995	2	85C	1,400	838	562	30	530	125	110	48	560	30
Meyers 145	5,995	2	145C	1,800	1,200	600	30	600	166	162	42	960	30
Mooney M-18L	2,250	1	65L	780	500	280	12	390	138	115	43	1,090	26/10
Piper PA-18	2,795	2	90C	1,500	790	710	18	360	110	100	44	624	35/4
Piper PA-18	2,995	2	108L	1,500	825	675	18	270	115	105	38	780	35/4
Piper PA-20 Pacer 115	3,295	4	108L	1,650	920	830	36	580	125	112	50	600	29/4
Piper PA-20 Pacer 125	3,795	4	125L	1,800	970	830	36	545	135	125	48	810	29/4
Piper PA-20 Pacer 135	4,265	4	125L	1,800	990	810	36	580	135	134	48	850	29/4
Ryan Navion 205 Utility	9,485	4	205C	2,750	1,721	1,029	40	500	157	150	54	830	33/4.5
Ryan Navion 205 DeLuxe	10,985	4	205C	2,750	1,782	968	40	500	163	155	54	900	33/4.5
Ryan Navion 260	13,985	4	260L	2,850	1,897	953	40	415	174	170	55	1,250	33/4.5
Temco Swift	4,495	2	125C	1,710	1,125	585	27.5	425	150	140	48	1,000	29/4

NOTE: C—Continental; L—Lycoming; J—Jacobs. Performance at gross weight, with landing speed and rate-of-climb at sea level.

★ 162-mph. cruising speed ★ 600-mile range ★ 18 to 21 mi. per gal. ★ Lands at 42 mph. with flaps

World Record for Engine Dependability

Reliability of the Continental C145 which powers the new Meyers 145 is a matter of distinguished record—it is the same engine which kept Endurance Fliers Barris & Riedel aloft 1,008 hrs. and Jongeward & Wodehouse aloft 1,124 hrs. both new world endurance records. Factory tear-down showed both could have kept on running indefinitely—your assurance of C145 stamina in the new Meyers!

Fly faster and farther for less in the thrifty Meyers 145

Compare the 4-star superiorities of the unrestricted new Meyers 145 and you'll agree it's first and foremost in travel advantages among 2-place planes.

In the Meyers 145 you'll fly greater distances with its 600-mile range (optional 1,000-mile tanks for those who desire), and cover more territory in less time with its 162-mph. altitude cruising speed. You'll fly 18 to 21 miles per gallon of fuel for important savings. Right from the start you'll be far ahead—the Meyers 145 is priced at half the cost of similar performance in larger airplanes.

Compare and you'll agree—never a better 2-place than the Meyers 145 . . . never in its price range all the efficient travel advantages of the Meyers 145.

MEYERS AIRCRAFT CO.
Manufacturers of Fine Airplanes
Tecumseh, Mich.

GENERAL AERONAUTICS, Inc.
Meyers Distributor
Meacham Field Fort Worth, Texas

ELIGHTPLANES

...ate ...limb ...mph	Span ft./in	Length ft./in.	Height ft./in.	Wing Load. lbs./sq. ft.	Pow. Load. lbs./hp.
800	35/2	21/8	7	8.51	16.10
800	37/6	25/3	7	10.2	14.1
890	32/10	25/2	6/6.5	14.92	13.52
,400	34/1	23	6/2	16.09	13.68
690	33/4	21/6	6/3.75	9.75	16.70
690	36	25	6/7	12.80	15.50
,050	36/2	27/1	7/2	15.30	13.90
,200	36/2	27/4	7/2	15.30	11.10
560	30	30/3	5/6	.....	.....
960	30	21/4	6	.....	12.41
,090	26/10	17/7	6/2	.....	.....
624	35/4	22/6	6/8	8.4	16.6
780	35/4	22/6	6/8	8.4	13.9
600	29/4	20/5	6/2.5	11.2	15.2
810	29/4	20/5	6/2.5	12.2	14.4
850	29/4	20/5	6/2.5	12.2	14.4
830	33/4.5	27/3	8/7.6	14.6	14.6
900	33/4.5	27/3	8/7.6	14.6	14.6
1,250	33/4.5	27/6	8/7.6	15.40	10.86
1,000	29/4	20/10.75	6/1	13	13.68

AIR REPORT

(Continued from page 18)

aircraft actually drifts off course while following planned headings, and this drift will be to left or right as it passes through various pressure fields on its long flight, depending on changing wind directions. But when the aircraft reaches its destination it will come out "on course" and in the majority of cases the shortest possible flight time will be achieved.

"In strong winds, the exact heading is more crucial than in light winds and the least navigational error may more than cancel out possible savings in flight time," says Brosche. "But by putting the winds to work, Clippers are regularly chalking up fast trans-Atlantic crossings that would have seemed fantastic only a few years ago." Pan American Airways says the Brosche-originated "average drift" method has saved the company over half a million dollars in less than two years. ★ ★ ★

Who Sold How Many in 1949

LIGHTPLANE deliveries by eleven manufacturers during the year 1949, as reported to the Aircraft Industries Association's Personal Aircraft Council and analyzed by SOUTHERN FLIGHT, totaled 3,358 and public preference for 4-pl. types was almost 3 to 1 over 2-pl. planes, 2,328 of the larger planes being delivered as against only 861 2-placers. Piper (954) and Cessna (643) led 4-pl. sales as they did 2-pl. deliveries, having 323 and 214 of these respectively. The year's deliveries are as follows:

	1-Pl.	2-Pl.	3-Pl.	4-Pl.	Totals
Aeronca		40		176	311*
Beech Bonanza				298	298
Bellanca				27	27
Cessna		214		643	857
Ercoupe		53			53
Luscombe		142		14	157
Mooney	73				73
Piper		323	1	954	1,278
Ryan Navion				215	215
Taylorcraft		37			37
Temco Swift		52			52
Totals	73	861	1	2,328	3,358

(*Includes 95 Model 7CCM sold to other than U. S. military customers.)

An Invitation to

Private Plane Owners of NAVIONS, BONANZAS *and* STINSONS *of the Southwest:*

We cordially invite the personal aircraft owners to

visit and inspect the new facilities of

AIRCRAFT SALES COMPANY *on Meacham Field, Fort Worth.*

Our completely modern shop is equipped to serve your varied requirements without delay

and maintains a stock of new parts for all aircraft.

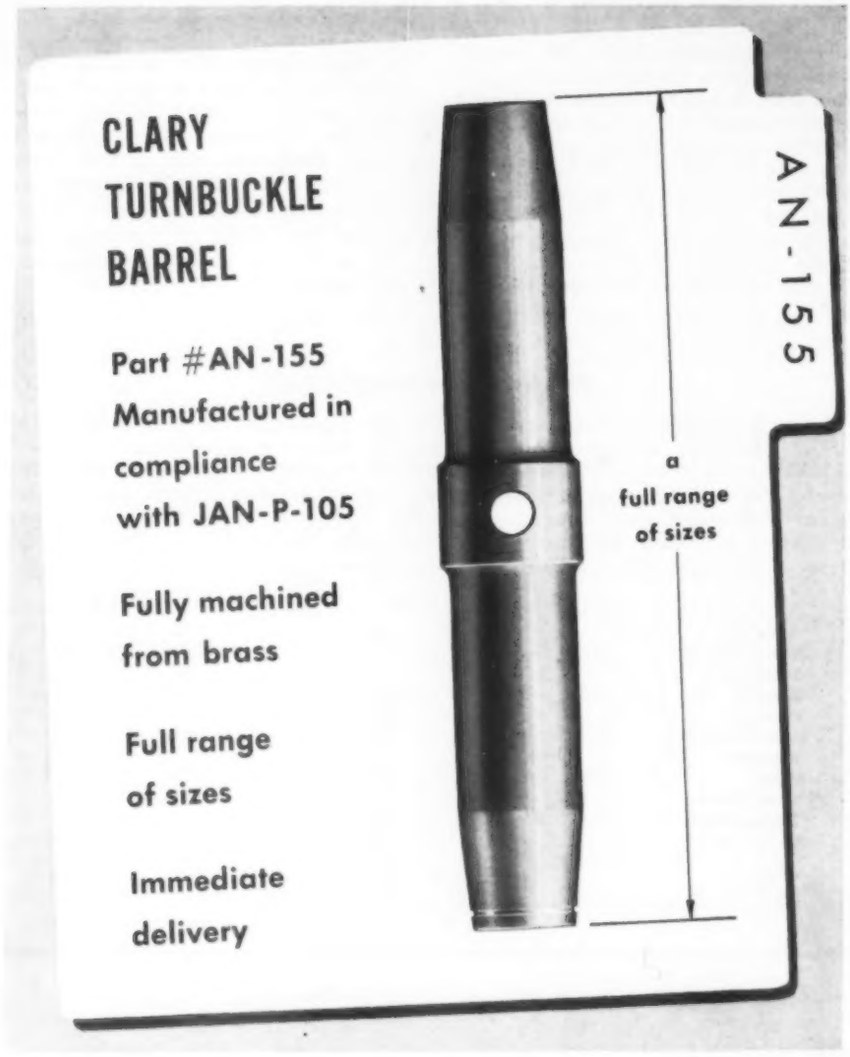
- PERIODICAL INSPECTIONS
- ENGINE OVER-HAUL
- INSTRUMENTS

Let us make a firm estimate on your present and future needs.

- PROPELLERS
- NARCO RADIO
- PAINT & DOPE

AIRCRAFT SALES *Company*

MEACHAM FIELD — FORT WORTH 6, TEXAS



Now . . . Machined by CLARY

for Strength and Precision

Machined by Clary to specification from brass. The manufacturing processes are controlled by the quality control specification JAN-P-105. This assures extra strength, absolute precision...and the rugged dependability that is synonomous with aircraft hardware by Clary.

ORDER TODAY

Clary
MULTIPLIER CORPORATION

AIRCRAFT HARDWARE DIVISION

serving the aircraft industry since 1941

425 E. 54TH STREET, LOS ANGELES 11, CALIFORNIA • CEntury 2-9221 • Cable Address: CLARYMULT

THE TAYLOR AEROCAR

(Continued from page 13)

to the completion of flight tests and a demonstration in a production model. Meanwhile, he has other problems which will need solving. One of these is sales. Who will sell flying automobiles? It probably will not be the average dealer now selling personal airplanes, says Taylor. He gave a talk to operators attending a recent aviation conference and was amazed by "the number of people who wanted us to do away with the Aerocar's two-control feature, and when we mentioned the possibility of selling flying autos from downtown showrooms we were practically thrown out of the meeting hall."

Taylor says operators just aren't interested in flying autos.

"On the other hand, a lot of interest is being shown by the automobile people. It looks as if they are going to be our real sales outlets. For the most part, they have cash as well as plant credit, experienced sales personnel, showrooms and service facilities. There are plenty of pilots looking for work who can give the auto dealer the only ingredient he lacks."

Like most people who have something new and different to sell, Taylor can wax eloquent over his Aerocar's possibilities in providing both flight and road transportation. He can also go to great lengths in deploring the present lightplane's shortcomings. In these matters he is typical of enthusiastic critics who see the need for more utility than those already established in the lightplane business have been able to provide their customers. Most of those criticized by Taylor have witnessed assorted pre-flying auto experiments in the past which looked more attractive in the prototype stage than they proved to be once placed on the market. A manufacturer or aircraft operator can put confidence and cash into experiments in limited amounts before something has to sell in sufficient volume on the market to provide a return which can keep him in business. After a few disappointments in experimentation, he has to settle on something of demonstrated market value, or transfer from aviation to something more practical.

Perhaps Molt Taylor or somebody will come up eventually with the right combination in a flying automobile. The need for such a machine is definite. But how to fill that need on a practical basis for the benefit of both the designer-producer and the ultimate purchaser-user will require all the experimentation which can be offered by projects such as Taylor's Aerocar. ★ ★ ★

The Birdmen's Perch

"We're lost!" the Captain shouted.

Unless you're one of those eccentric buzz-boys who enjoy an emergency landing in somebody's pea patch, those words should scare the be-jeepers out of you.

It gets you right under the safety belt, as they say, and it ain't good. Yet, plenty of otherwise good flyers, who don't know their navigation from a hole in the ground, just plain go out and "get lost."

Take the average lightplane pilot who flies without radio help. He's a demon at following a four-lane highway on a clear day, but throw in some poor visibility and it's another story. And—even if he sports the latest in radio equipment, a fuse can blow his set deader than a herring.

There's only one answer—practice your navigation! Keep your technique "fresh" and there's no reason for you to ever get lost or miss your destination.

And Speaking of Destinations...

One of your regular destinations should always be the source of that scintillating super-lube, Gulfpride Aviation Oil—Series D!

Modestly enough, it's the world's finest detergent dispersant oil for horizontally opposed engines because—it's the only lightplane oil put through Gulf's exclusive Alchlor process to remove extra carbon and sludge formers!

If your plane has the nasty habit of crying like a baby when you wheel it out of the hangar, all the little fellow needs is a shot of Gulfpride Aviation Oil—Series D—to free those sticky valves and rings.

And . . . you'll increase those periods between overhauls up to 100%!

Little Known Facts Dept.

And now, students, if you can tear your eyes away from "Smiling Jack" for a

minute, the Dean has an important honor to confer. Will Mr. Leonard King of Adrian, Mich., step forward, please.

Mr. King, your Little Known Fact About Well Known Planes has been carefully scrutinized by the faculty and termed not only appropriate, but highly sensational. Therefore, with the powers invested in me by goodness knows who, I commission you as Perch Pilot (bottom rung)! If the student body will now rise, I shall read the Little Known Fact, submitted with PROOF!

"It was just twenty years ago that Jim Doolittle made the first instrument landing under the hood at Mitchel Field and proved that it was possible."

Ah pioneers, oh pioneers! Nice work, Leonard! Now suppose you tell the other boys and girls how proud you are of the new diploma and just how easy it was to dig up that L. K. F.

Don't remain unsung forever. Send your Little Known Fact About Well Known Planes – with PROOF—to this address:

GULF AVIATION DEPT., GULF BUILDING
PITTSBURGH 30, PA.

Gulf Oil Corporation . . . Gulf Refining Company . . . marketers of

GULF **GULF AVIATION PRODUCTS**

BE SURE TO ALWAYS CHECK YOUR MAGNETOS BEFORE TAKE-OFF...
PLEASE CHECK
OR YOU MIGHT HAVE IGNITION TROUBLE IN THE AIR...
HMMMMM
AND NOT BE ABLE TO UTILIZE THAT TANKFULL OF...
TO TOWN 12 MI.
!*@%!
SUPER-POWERFUL GULF AVIATION GASOLINE
GULF
Miller

JUST AMONG OURSELVES

(Continued from page 8)

routine and emergency use of the radio. If enough radio-shy pilots could see this impressive demonstration we believe they would never fail to use the flight assistance services at their disposal. This type of education and approach, plus weather recognition and an improvement in our weather information such as suggested by the visual flight information area boards, can go far to stem the tide of fatal weather accidents.

An extension of progressive, realistic and practical applications of such approaches to the problem as mentioned here in the matter of flight assistance services to transient airmen contains even broader implications for the complex field of aviation safety. Communications and dependable weather information are basic. We all have to live together in the air—the airlines, the military services and the executive and private airplane owners. No one element can disregard the problems peculiar to the other two. And the non-flying public fails to distinguish between the various kinds of accidents —they all involve airplanes, and airplanes just ain't safe, they say. All you have to do is read the daily papers.

So the shoe is pinching everybody. It's high time we get down to reality and start whittling on the majority of our air accidents which are making the headlines every day and adding more bricks to the high wall that's keeping 95 per cent of our people out of airplanes. You don't need much imagination to figure out what it would mean to this business if we cut the non-air carrier accident rate in half. And that's about the percentage of accidents that can be wiped out if we get to work and quit playing ostrich.

SIGNS OF THE TIMES

THERE is a move on foot to bring all the widely separated segments of aviation together in an attempt to determine whether or not there are sufficient areas of mutual interest among them to work together on specific objectives, which in the aggregate might provide a semblance of a dynamic national aviation policy. Whether it is possible to bring a house divided against itself into a definite field of cooperation remains to be seen. But we confidently believe it's worth any effort or time required. Surely we all recognize that national policy boards have failed as have the downtown hurrah clubs.

A year ago in Fort Worth, Texas, during sessions of the annual Fourth CAA Regional Operators Conference, a committee was formed to start cooperating with scheduled air lines in matters of mutual concern throughout the Southwest. As a result of this committee's efforts harmony replaced feuding, tolerance and understanding of the other fellow's problems replaced ignorance and derision. They soon found out they were both working toward the same goal—public acceptance of their respective services.

Last month, during the same annual conference, progress was reviewed and national aviation leaders in attendance were amazed at the list of accomplishments. If it could happen on the regional level why can't we get together nationally? Maybe the CAA, the CAB and the many state and industry aviation organizations might also find common ground for cooperative efforts. CAA Administrator Delos Rentzel agreed to call a meeting for initial discussions sometime in May.

Next month in Columbus, Ohio, the scheduled air transport industry will get together with the American Association of Airport Executives during that organization's annual convention. Many state aviation officials will also be present to discuss their common problems.

From where we sit it appears that our industry is beginning to mature —to work together as an industry instead of going along as relatively weak, isolated and purely self-interest groups turning out one of the poorest industry public relations jobs in the nation, confusing the Congress as well as the average man in the street to such an extent it appears we have twelve different industries instead of one—the aviation industry.

One of the speakers at the second annual National Agricultural Aviation Conference last month in Fort Worth told the story about a colored man with a pair of mules who were continually being irritated by horse flies biting their ears. The darky was adept at whip-popping the flies off the mules' ears without touching the mule. After several demonstrations a hornet lit on an ear but the darkey left it alone. When queried about his reluctance to disturb the hornet, the darkey replied, "Boss man, I leaves them things alone—they's organized!"

It's up to us whether we remain flies or become hornets. It's encouraging to find some top-flight industry leaders now ready to make the change.

★ ★ ★

DELTA WING high speed evaluation tests have been conducted with this Convair XF-92A at Edwards Air Force Base, Muroc, California. Captain Charles Yeager, who made supersonic history in the XS-1 built by Bell, and Major Frank K. Everest did the flying. Yeager is shown at left, with E. D. Shannon, Convair's chief of experimental flight. Convair engineers believe the Delta design could develop into the standard configuration for transonic and supersonic aircraft because of its low drag and excellent stability at extremely high speeds.

—(Convair Photo.)

BEECHCRAFT "BONANZA"

Follow the Lead of Businessmen Who Take to the Air for Better Profits on the Ground.

Men, horses, airplanes . . . it's the blue chips variety that set the pace. That's why among business leaders everywhere there is an overwhelming preference for Beechcraft Airplanes and for J. D. Reed Service. Every record you look at will prove that Beechcraft is truly the Nation's Pacemaker in the personal and business flying field and that J. D. Reed is the country's finest in Beechcraft Sales and Service.

Take the popular four-place Bonanza—it comes fully equipped for instrument flying including two-way radio, landing lights, necessary instruments and is thoroughly soundproofed. Or if you need a larger airplane, take the Executive Twin-Engine Transport. It is powered with two 450 H.P. engines and leads the field in fast, quiet, smooth, comfortable transportation.

See these outstanding airplanes at the J. D. Reed hangar today. Look over the efficient, modern facilities throughout the hangar for keeping your old or new plane in "pay-off" condition.

BEECHCRAFT EXECUTIVE TRANSPORT

J. D. REED SERVICES

Beechcraft Sales and Service
Super Aircraft Repair Station
Aircraft Parts
Gasoline and Storage
Aircraft Radio Distributors & Service
Charter Service
Air Ambulance Service
Aviation Novelties

J. D. REED CO., Inc.
SALES SERVICE
Beechcraft
DISTRIBUTOR

HOUSTON
Municipal Airport

NEW ORLEANS
New Orleans Airport

ACAPULCO

(Continued from page 11)

ranges. A little way up into the canyon and Art is busy shooting pictures of the magnificent peaks and granite formations along sheer mountain walls. We look down and spot the 2-place Luscombe, a beautiful sight silhouetted against the lush valley with its twisting little stream.

Thoughts While Cruising

All of us thrill to the sights as we realize the full meaning of skimming along through space without effort, dwarfed by the tremendous Mexican vistas which unfold below and on all sides. There are tourists in autos on the highway in the valley below, but earthbound travelers aren't really seeing Mexico—they see only the narrow little band of countryside along the shoulders of the highway. Surely they are missing some of the richer experiences available to those who fly in lightplanes. If more of them could ride with private fliers there would be many more thousands in the air today.

On past Saltillo and we fly into San Luis Potosi, our only stop between Monterrey and Mexico City. Then Art takes over to do some of the flying. We cruise at 9,500 ft., and with 2,400 rpm. the little Pacer indicates 108 to 110 mph. to give us a true air speed of 127-128 mph. Outside air temperature starts climbing as we near Mexico City and we welcome the Pacer's efficient cabin ventilation. As we sail into the broad "bowl" in which Mexico City is nestled, we can only listen to the airport control tower as our VHF whip antenna for transmitting was broken off back up the line. But we get a green light, just like at home, and the Pacer settles in on the big Mexico City runway for a perfect landing.

It would take weeks to fully enjoy Mexico City but we limited ourselves to a couple of days of sight-seeing. On a Saturday morning we took off for Acapulco, again getting a surprise from the Pacer. The Mexico City airport is at an elevation of 7,300 ft., but with our full load and without any wind we were in the air in about 2,000 ft., even though we held it on the runway to build up extra speed. Because it enables the little Lycoming to pick up speed fast, the cross-over exhaust system was a factor.

Over the Hump to Acapulco

Using the Mexico City beam for some distance out, we were again thankful for the Pacer's quiet cabin and its dome speaker. We had to go up to only 10,500 ft. to clear for a pass Southeast of Mexico City and go directly across the mountains to the Pacific. Here the mountain scenery is beautiful, especially as we near the coast and its rich vegetation. Looking out over the tree-covered ridges and peaks, we can't help thinking a moment after Bessie Fry speaks from the rear seat. "Ed," she asks, "where would you put it now if you had to?" So we look around a bit and point to clearings here and there down in the valleys. In planes such as our Pacer, we could glide without power to a dozen places for a safe landing. Even over the mountains, we'll take the lightplane over the auto for safely, eliminating the hairpin curves and whatnot, and feel comfortable with our knowledge that the lightplane's safety factor is at least 2 to 1 over any other means of private travel.

As we top the last range, we study the horizon with the Pacific Ocean's tremendous "hill" of water stretching as far as the eye can see, bulging up into an arc caused by the earth's curvature as seen from our altitude of almost 11,000 ft. Then we nose the Pacer downhill for a gentle landing at the fine Acapulco airport. We rejoin our Kansas Flying Farmer friends, all of us staying at the Papagayo Hotel, just across the road from the beach. After lunch and a rest, we spend the afternoon swimming.

Acapulco is without doubt one of the continent's most beautiful spots. We enjoyed six days of it. And did we ever catch fish? There wasn't a single Kansan that went deep sea fishing that didn't bring back a sailfish. They really mopped up.

Returning, we climbed the Pacer directly to 11,000 ft. and crossed over the "hump" at between 11,000 and 12,000 ft. The good little Piper was still showing plenty of climb and indicating a good 105 mph. at 2,400 to 2,450 rpm., which corrects out at about 127 mph. true air speed. After wading through all the red tape for our clearance from Mexico City for Monterrey, the tower called us back after clearing us for take-off position. "For what?" we asked. To have us take a written copy of the weather report down to the commandante's office. After all that trouble, all he did was glance at it and say, "You may go." A situation like that certainly needs correction if air travel is to enjoy a normal, healthy growth. It so happens that we had already obtained weather information. What we hadn't done was to show it in written form to the commandante.

Pacer Performance Summarized

Back in Monterrey, we spent the rest of the afternoon and the next morning shopping for last-minute trinkets and souvenirs with the Kansas group, taking off at noon for our flight to Kansas. We cleared Customs at Laredo International Airport, enjoyed a leisurely lunch and had the oil changed there and still made it in the Pacer to Abilene well before sundown. Next morning, we fought headwinds but got back into good old Ken-Mar Airpark by 11:30 a. m.,

LAREDO WELCOMES FLIERS

GROUPS of private fliers desiring to visit Mexico will be interested to learn that fullest possible cooperation awaits them at Laredo Municipal Airport, Laredo, Texas. "Nothing gives us more pleasure than seeing and entertaining outsiders and we aim to put our Municipal Airport on the map by doing everything possible to assist groups of private fliers in clearing between Mexico and Laredo quickly and inexpensively," says Charles G. (Pete) Pearcy, city aviation director.

All Laredo expects in return is for satisfied airport visitors to tell others. This is being done by members of the Kansas Flying Farmers Association, who have made yearly flight parties through Laredo to Monterrey and beyond for the last two years. On the first junket, they were given a barbecue and square dance at the Laredo Country Club and officials did everything possible to make their visit enjoyable. The second junket this year was honored with even more elaborate entertainment arrangements which included dinner and "the works" at the famous Cadillac Bar. Everybody had a wonderful time and Laredo hospitality should become the talk of Kansas among flying farmers. Kansans and others who have partaken of Laredo's friendly activities in behalf of private flying should make it a point to spread the good word so others may make Laredo their international gateway.

Hospitality like Laredo's will go far to develop private flying between the U. S. and Mexico. Its fine airport, with alert management and efficient servicing facilities, is winning this outstanding border city far-flung fame as the "gateway to the Americas" and Aviation Director Pearcy and his civic and business associates deserve full praise from aviation for their efforts.

Ryan-Navion
Factory-Authorized
Service Operators

are your guarantee of
Customer Satisfaction . . .

Florida
WOOTTEN AVIATION INDS.
Municipal Airport, Orlando

Illinois
HOWARD AVIATION, INC.
Mt. Hawley Airport
Peoria, Illinois

Louisiana
LOUISIANA AIRCRAFT
Municipal Airport
Baton Rouge, Louisiana

Minnesota
VAN'S AIR SERVICE, INC.
Whitney Memorial Airport
St. Cloud, Minnesota

New Jersey
MALLARD AIR SERVICE, INC.
Teterboro Air Terminal
Teterboro, New Jersey

New York
BUFFALO AERO. CORP.
Hangar 1, Buffalo Airport
Buffalo, New York

Pennsylvania
AVIATION CONSULTANTS, INC.
Reading Municipal Airport
Reading, Pennsylvania

Texas
GENERAL AERONAUTICS, INC.
Meacham Field
Fort Worth, Texas

Washington and Alaska
WASHINGTON AIRCRAFT & TRANSPORT CORP.
Boeing Field
Seattle, Washington

Mexico
MORGAN & WALTZ, SUCS., S.A.
Monterrey 101-410
Mexico City, Mexico

Puerto Rico
DORADO AIRFIELD
Dorado, Puerto Rico
(Branch Off.: International Terminal, San Juan)

NAVION OWNERS . . . .
Are you overlooking a good thing?

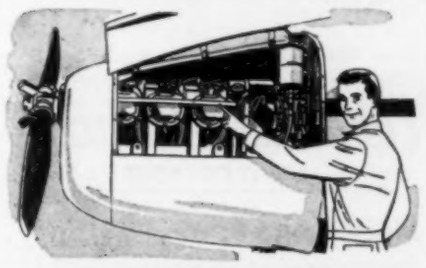
In order to provide the finest in NAVION service and maintenance the Ryan-Navion Factory-Authorized Service Operators have set a new standard for quality workmanship. This standard requires perfection down to the final degree, whether the job is large or small. No short-cuts and no frills, just precise and exact workmanship with the right tools for the specific job.

Every Ryan-Navion Factory-Authorized Service Operator carries a complete stock of parts and accessories for the Navion, has the latest handbooks, all current bulletins and receives information from the factory on the latest service and maintenance techniques.

Don't overlook a good thing. . . .

Be Sure—Rely on Ryan-Authorized Navion Service from coast to coast.

For more efficient power, in winter and summer, let us keep your engine and its accessories in first-class condition with periodic checks and overhaul. Our engine specialists use only authorized parts.



ONLY
CONTINENTAL MOTORS CAN OFFER ALL THIS!

When you avail yourself of Continental Motors' Remanufactured Engine Plan, you get values obtainable *nowhere else:*

YOU GET

Completely modernized engine, embodying every engineering refinement found in current production. In the C145, for instance, these include latest type dynamic damper crankshaft, through-bolt crankcase, forged steel camshaft, cast cam-followers and all other late modifications; in the E185 it also includes newest oil-pump gears, hardened oil-pump drive-gear shaft, and other oiling system features providing greater output—plus a 205-h.p. take-off rating.

YOU GET

Complete accessory equipment, tested and matched to the engine on which they are installed. This includes magnetos, wiring harness, spark plugs, carburetor, oil sump—and on models having provision for them, starter and generator also.

YOU GET

New engine warranty and new zero-hour engine log book, which, like the items above, can be had only on engines remanufactured by the factory itself.

FOR SAFETY—FOR ECONOMY —FOR SATISFACTION—

SEE YOUR

CONTINENTAL DEALER

Continental Motors Corporation

AIRCRAFT ENGINE DIVISION

MUSKEGON, MICHIGAN

four happy people completing a wonderful trip in a marvelous little airplane.

We had covered 3,225 miles in less than 26 hours of flying time, which averaged out at 124.8 mph. for our ground speed. To the Piper Pacer we take off our hat in tribute for such excellent performance. We had consumed 178.3 gals. of fuel for an average of 6.9 gals. per hr. Total out-of-pocket expense for transportation was $106.32 for the four of us, or $26.58 per person. Where else can transportation be bought for so little? Here's how the costs for transportation added up: Gasoline, $71.32; oil (one change included), $4; hangar storage, $12, and landing fees, $19; total, $106.32.

Our flight to Acapulco can be duplicated by others in a Pacer as an easy 1½-day daylight trip from the geographical center of the U. S. to the lower coast of Mexico in a comfortable airplane costing less than some automobiles. Certainly the private airplane has reached a high point of utility and a high degree of safety, unparalleled in the history of personal transportation. But don't take our word for it. There were 150 Kansans who also went along in private planes. Most of us will be going back. ★ ★ ★

Airmen's Calendar

Apr. 16-20—American Association of Airport Executives' Annual Meeting, Neil House Hotel, Columbus, Ohio.

Apr. 22-23—Memphis Aviation Day Celebration, Memphis, Tenn.

April 24-26 — Airport Operators Council Annual Meeting, Carter Hotel, Cleveland.

Apr. 29-30—5th Annual Southeastern Air Show, Jacksonville, Florida.

May 5-6 — National Intercollegiate Air Meet, Stephens College, Columbia, Missouri; Kenneth Newland, Stephens College, in charge.

May 13-14—Texas Private Fliers Association's 1950 Convention, Mineral Wells, Texas.

May 18-20—Women's National Aeronautical Association Annual Meeting, Tulsa, Okla.

May 20-21—National Air Carnival, Birmingham, Ala.

May 22-23—Third Annual Air Transportation Conference, Purdue University, Lafayette, Indiana.

June 3-4—Air Fair and Industrial Exposition, Shawnee, Okla.

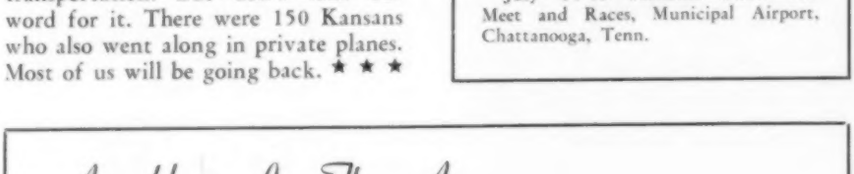
June 10-13—Annual NAA Convention, Hotel Statler, St. Louis, Missouri.

June 21-25—Ninety Nines Convention, Fort Clark, Brackettville, Texas.

July 14-16—National Pilots Air Meet and Races, Municipal Airport, Chattanooga, Tenn.

At Home In The Air

BELLANCA *Cruisemaster*



The new Bellanca "Cruisemaster" — the airplane of 1950! Sensational new features . . . new wide windows . . . new wide doors . . . new soundproofing . . . luxurious interior

STANDARD EQUIPMENT, Lycoming 190 engine — 2-way VHF — Automatic hydraulic landing gear and flap mechanism — full controllable Hartzell Propeller — navigation lights — standard edge instrument lights — spacious baggage compartment — chrome grill and strips.

PERFORMANCE, Cruising speed 180 mph. with 75% power at 6,000 ft., landing speed with flaps at gross weight (sea level) 43.6 mph., rate of climb 1,400 fpm., 22,500 ft. service ceiling and 680 miles maximum range. Empty weight 1,525, gross 2,600, useful load 1,075.

BELLANCA AIRCRAFT CORPORATION

New Castle, Delaware

Questions and Answers For Airport Operators

Private Hangars on Public Land

QUESTION: What do you think of private ownership of hangars on a public airport? Recently I have tried to persuade the local city commission to permit me to build a "T" hangar so that I won't have to tie my airplane down. There is a large hangar on the field which will accommodate about eight airplanes but it is full most of the time and I can never be sure that my own aircraft will be under cover. The city commission says that it does not believe that privately-owned buildings should be built on publicly-owned ground.

ANSWER: We are entirely in favor of allowing private enterprise to build hangars when public money cannot or will not build enough hangars to meet local demand. We have heard some people advance the theory that all hangars should be built with private money but we do not believe in that either. Some public agencies owning airports have enough funds to build all the hangars necessary for current demand and do so. In some communities no such public money was available and all the hangars have been built with private money. To limit the ownership to one element or the other seems unwise. We think we can reach this conclusion: That where public money is not available to build the necessary facilities for storing aircraft or for commercial purposes on an airport, no obstacle should be placed in the way of private money doing that same thing on a reasonable basis.

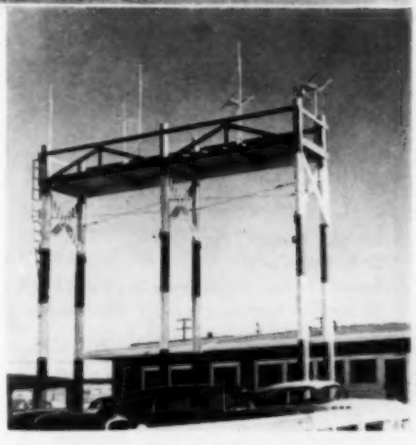
If a city commission feels that it should own all the buildings on an airport, that can even be arranged when a building is built with private money. It has been done in some communities in this way. Where hangar space was inadequate, individuals would build and immediately turn over the building to the public agency. In return, they were allowed free occupancy for a number of years calculated on a basis that their investment plus interest over that free rent period would amount to approximately the same as monthly rental of a public hangar of a similar nature. Other communities lease land and allow the ownership of a privately-built hangar to remain in the owner's hands, keeping those rents low enough to make such a proposition attractive. Still others allow the regulated construction without rent of individual hangars by private money with the realization that increased use and ownership of aircraft on the airport means increased sale of fuels, lubricants and services to the airport and its concessionaires. Let's not make a hard and fast rule as to public or private ownership. To do so might restrict development.

This Month's Modern Airport: Big Spring

BIG SPRING Municipal Airport at Big Spring, Texas, is strategically located to attract a growing volume of transient aircraft business, both for refueling and night stops. But it continues to attract repeat business only because Airport Manager Robert J. (Jack) Cook and his staff maintain outstanding service through alert, resourceful management. It has not only paid its way but has improved and expanded its facilities—the latest being a $65,000 terminal building which is one of the country's model small terminals. Money earned on the airport made up the entire amount of local funds matching U. S. aid in building the terminal. Latest non-aviation revenue source has been the storage of cottonseed on the ground in the open air.

Big Spring traffic during 1949 totalled 36,986 airplane arrivals and departures comprised of 11,285 local civilian, 9,380 transient civilian, 8,821 air carrier (American, Continental and Pioneer) and 7,510 Air Force and Navy. Well over 500,000 gals. of aviation gas were serviced; only one other civilian-operated airport in the nation services 115-145 octane fuel to military planes as does Big Spring Municipal. Military fueling is on a contract basis and the airport office has an inter-phone connection with Carswell Air Force Base at Ft. Worth for filing and closing of military flight plans.

"We've serviced virtually every known type of aircraft except rockets and flying saucers," says Cook. "Largest single load ever put aboard one airplane was 5,000 gals. of gas and 100 gals. of oil for a B-29 that landed non-stop from an Alaska take-off." Phillips Petroleum supplies Big Spring's fuel.



New terminal building and antenna tower at Big Spring (Tex.) Municipal Airport. —(Hugh Mathis Photos.)

Solution to Terminal Antenna Puzzle

QUESTION: We are nearing completion of our new small terminal building and there is one problem I'm sure is coming up. Maybe some of your readers have found the answer so I'm sending the question to you. I've seen a lot of terminal buildings in other towns with roofs and cornices so cluttered with radio antenna that the buildings were almost unsightly. Now I know that the antenna are necessary but it seems a shame to build an attractive building and then have the effect spoiled by numerous masts and waving whips. Have you got an answer?

ANSWER: We can't really say we have the answer to that one because airlines and governmental agencies in airport terminals certainly can't do without radio and radio means antenna and masts somewhere. However, we believe that Jack Cook, the airport manager at Big Spring, Texas, has come up with a mighty good solution. They have just completed one of the best looking terminals we have seen in a long time out there. If you don't believe us, look at the picture on this page.

This low, well proportioned building would certainly look pretty bad with a lot of stuff sprouting out of the roof. At this airport one batch of about twenty antennas was necessary. So joint meetings were held between

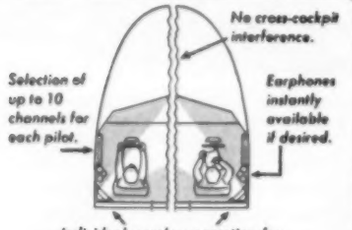
AIRCRAFT RADIO CORPORATION

To Pilots of Two-Pilot Aircraft, and Aircraft Radio System Engineers

NEW FREEDOM OF CONTROL
LESS PILOT FATIGUE

With the Type F-11 Isolation Amplifier CAATC No. 1R4-1

Weight: 8 lbs.
CAA Type-Certificated. Immediate delivery in 14 or 28 volt dc models. Complete details on request.


No cross-cockpit interference.
Selection of up to 10 channels for each pilot.
Earphones instantly available if desired.
Individual speaker operation for pilot and co-pilot.

The new A.R.C. Isolation Amplifier performs two control functions that have long presented problems. (1) Each pilot has *independent* selection of up to ten audio input channels in *any combination* — without cross-cockpit interference. Radio functions may be delegated so that each pilot works at peak efficiency in complex navigational and communication situations. (2) It operates individual cockpit speakers, with earphones instantly available if desired. Since the CAA no longer requires wearing of headphones when cockpit speakers are installed, the A.R.C. Isolation Amplifier relieves pilots of considerable discomfort and fatigue — particularly in hot weather and on long flights.

ARC
Aircraft Radio Corporation
BOONTON, NEW JERSEY
Dependable Electronic Equipment Since 1928

BEECHCRAFT FACTORY INSPECTION OF BONANZAS in the field were conducted without charge for owners again this year. Here's Jim Roach of the Beech Service Department inspecting Bonanza belonging to V. Dabney (right) of Dallas. Looking on behind them are W. J. Connell, production chief at Southwest Airmotive, where Dallas inspections were conducted, and Beech Distributor Jim Gray of Dallas, who sponsored the factory inspections in his North Central Texas territory.
—(SOUTHERN FLIGHT Photo by Tom W. Collins.)

the City and the CAA and as a result the antenna tower shown in the photograph near the building was designed and built. It is painted international orange and silver and in no way detracts from the terminal or its grounds. Incidentally, we were very interested the last time we were in Big Spring in the design and effect of this terminal building. It is inviting both inside and out.

SCOTT...A LEADING NAME IN AVIATION ACCESSORIES...SCOTT...A LEADING NAME IN AVIATION ACCESSORIES...SCOTT...A LEADING NAME IN AVIATION ACCESSORIES...SCOTT...A LEADING NAME IN AVIATION ACCESSORIES...SCOTT...A LEADING NAME IN AVIATION ACCESSORIES

For STINSON 108 CESSNA 120-140-170 AERONCA 15

The New **Scott** #3200 8" Pneumatic **TAIL WHEEL ASSEMBLY**

Available for TEMCO (Globe) SWIFT

- BETTER VISIBILITY Over the Nose
- Lower Aircraft Maintenance Cost due to shock-absorption qualities of the big pneumatic tire. Less tail spring breakage
- Quiet, smooth, easy taxiing and landings

Strong crosswinds and rutty fields are a problem no longer when your Stinson or other 4-place plane is equipped with a Scott 8" Tailwheel Assembly. Taxiing is smooth and easy — with 4-ply pneumatic tire, automatic full swivel, and positive control far beyond rudder travel. Improved maneuverability on field or in hangar.

See your Scott Distributor or Dealer, or write to

Established in 1932
Scott
SCOTT AVIATION CORPORATION
235 ERIE ST., LANCASTER, N. Y.

Write for FREE 1950 Accessory Folder

When 1-Man Operator Is Absent

QUESTION: As the operator-manager of a small-town airport, I have a problem. This airport is practically a one-man operation. We have some T hangars, a shop, and a small office building. I am doing some charter work and some other work for ranchers which takes me away from the field a part of each day. My wife usually is on hand to look after customers because I believe that transients and locals both must be able to find service, but the volume of business isn't great enough to support a full-time helper. Have you any suggestions to offer?

ANSWER: We were in such an airport as yours the other day and found that the operator had faced the same situation you are now facing. He was away apparently on a charter trip and no one was in attendance at the airport, but he had left at the desk in the office a written notice that anyone needing service in his absence could call certain telephone numbers. It concluded with the statement that if a trip to town was necessary, just take the red pick-up which was outside the office.

Now if we were to elaborate on that method, we would suggest a printed placard that would catch the eye of any visitor at the airport giving the numbers to be called for gasoline service, for taxi, or for the airport manager's home. If a car was available on the airport and the

(Continued on page 34)

AIRPLANES
Send for Free List
World's largest stock personal and light commercial.
Lowest Prices — Domestic and Export.
We do everything except pay for your plane.
Be thrifty in 1950!
Dealers write for Dealer discount setup.
VEST AIRCRAFT CO. WHOLESALE
Field and Offices: Box 38, Capitol Hill Sta.
Denver, Colorado

Veteran Air Pilots Association

Meet the members of a unique organization of old-time pilots who have no officers, meetings, politics, by-laws or dues.

If you have a minimum of 1,500 certified solo hours and have been flying for at least ten years you can qualify for membership in the Veteran Air Pilots Association. Applications should be sent to Leslie P. Huey, Louderman Building, St. Louis.

By JIM WHEELER

WE'VE found the oldest pilot in the United States from standpoint of age, and another VAP member has the distinction, we believe, of having flown for more years than any other active executive pilot in the United States.

First for the oldest. He is James W. Montee, 2331 Buckingham Road, Los Angeles, California. "I was born," says Mr. Montee, "in a log cabin on a farm near Macomb, Illinois, on Oct. 22, 1862. I was raised on corn bread

Oldest U. S. pilot at 87, J. W. Montee of VAP is shown with Granddaughter Pauline Cofass, Granddaughter Dianne Cofass and Great Grandson Kenneth Huyler.

and wild turkeys, mostly." That makes him over 87 years old today—and he's still flying. While all young pilots go out in search of some wild turkey to go with their corn bread diet for longevity, here's the story of Mr. Montee's flying background:

"My son, Kenneth, was a pilot in the first World War and he taught me to fly in 1922 and I soloed on my 60th birthday," he says. "The same year I built the first monoplane in my part of the country. Since then, I have missed but one birthday without taking a flight. On my 80th birthday I flew a DC-3 for an hour.

"I have flown 38 makes of airplanes without a scratch, having done passenger work, student instructing, moving picture work and aerial photography. I opened Clover Field in Santa Monica where the Douglas factory is located now. In 1926 I was a guest of the Army on a flight from ocean to ocean in an army plane."

Mr. Montee, who holds pilot's license No. 414, celebrated his 87th birthday by making a flight in an Aeronca Sedan. Reminiscing, he recalled how he moved to Kansas at age 10 with his family in covered wagons, and when he was 15 he drove three yoke of oxen breaking prairie sod for cultivation. "They called me the crazy flying machine master in school because I talked about flying like the birds," he said. Moving to Dodge City, Kansas, in 1882, he drove a stage coach for two years behind a team of 4 horses. That's when Dodge City was in its heyday "and they were filling Boot Hill with men with their boots on."

Russ Holderman

Another distinguished VAP is Russ Holderman, chief pilot of the Gannett Newspapers, who has been flying longer than any other U. S. executive pilot—38 years as of May 11. It all started when he was a kid of 17 in a glider. Since then, in over 15,000 hrs. of flying, he hasn't cracked up an airplane. His parents' home in the Bronx was near the old Morris Park Race Track which was used by the Aeronautic Society of America in 1908 as New York's first airdrome. He had seen enough gliders and built enough model planes by 1911 to save nickels with a friend, buy some spruce and wire, and build a Chanute glider —the kind with a hole in the lower wing through which the "pilot" put his head and shoulders while his body and legs dangled below. Young Holderman's head and shoulders it was, for he won the test flight honors by a flip of a coin. While two helpers started running toward an embankment, pulling the glider with ropes, the "pilot" started running and carrying the glider. At the embankment, the pullers let go and Russ gave a mighty push. The wings lifted him slightly, sustained him enough to break the fall, and he wound up in a heap beneath the 75-lb. wings. On a second try in a borrowed glider, he got as high as 40 ft. If he had leaned back, instead of forward, he might have flown farther. Or maybe he would have stalled. But as he leaned forward it nosed down and this time the impact sent the aeronaut to the doctor's with a broken collar bone and a couple of cracked ribs.

All the while Russ was helping with the handiwork of a neighboring airplane builder, Fred Schneider, who was building a Curtiss pusher with a 4-wheel Farman landing gear. A fair mechanic, he accompanied the builder to Mineola for assembly of the ship and Schneider taught him about controls while letting him taxi as a "grass cutter," having wired the throttle to allow only 25 mph. When the throttle was unwired after a week of this, he had to promise to stay below 10 ft. before Schneider let him go. Opening the throttle, he started easing back on the wheel expecting a gradual takeoff. Instead, a bump sent the craft dizzily skyward for 40 or 50 ft., from where Russ had to apply forward pressure to keep his promise to stay below 10 ft. At the end of a 3,000-ft. flight, he landed, turned around, and flew back.

But this, naturally, didn't make him a pilot, said Schneider. He had to have some "instrument" instruction. For this a 12-in. length of string was suspended in front of the pilot's seat. Keep it straight and you're flying, says Schneider, but if it angles off to the side you're slipping and if it ever goes limp you're through. That emphasis concluded, Holderman was told to get going. He took off, circled the field, and landed, whereupon Schneider pronounced him a "pilot."

When the U. S. entered the War in 1917, he enlisted at Mineola (now named Hazelhurst Field), home of the 1st Aero Squadron. A friend had written the commander about Holderman's flying ability. But instead of flying Jennies, he was assigned as motorcycle repairman. Mechanical training, not his flight instruction, eventually got Holderman into the air. He became hangar crew chief and the commander's ship was his responsibility. On a hop with the boss one day, he was allowed to take the controls and demonstrated his ability. Next day he was placed on the flying list and was assigned to an instructor, who soloed him after 90 minutes of instruction. Promoted to sergeant, he became an instructor. But he never got overseas, although he did fly some coastal patrol.

After working as an airplane and

engine mechanic at an air mail shop, and eventually being signed on as a pilot, he joined a fellow air mail pilot in a passenger hopping business at a field in Queens. Later he bought a Jenny of his own and made enough from $10 straight rides, $15 stunt rides and $60-hourly instruction to get married. It was 1921 and he took his bride to Atlantic City in the Jenny for the honeymoon. A couple more prosperous seasons and he moved to Florida and aerial photography, winding up in 1928 as a flying real estate salesman who took his prospects out for an aerial view of prospective property from a big flying boat. In one 10-day period his commissions totalled over $10,000, so effective were his flight inspections and sales talk.

Came a hurricane and the bust and Russ and his wife had tough going—until she took a visitor's order for a new-type monoplane, getting his check for $12,500 in advance. The customer was a LeRoy, New York, gelatin manufacturer, Donald Woodward, and he hired Holderman as his pilot and financed an airport and flight school operation in New York for Holderman. Airplane sales were few and far between in the early 1930's, but among Holderman's prospects was Frank Gannett, the newspaper publisher. Six months after he had called on the newspaperman, Holderman was asked for a flight demonstration. A week later when Gannett bought the airplane, a Stinson, it was with a proviso that Holderman fly it as Mr. Gannett's pilot. He has flown for the Gannett enterprise ever since that sale in 1934, becoming chief pilot in 1936, except for wartime service in flight instruction. He flies the firm's Lockheed Lodestar.

Fish Hassell | **Jimmy Viner** | **Leon Tanguay** | **Gustave De Bustamante**

FISH HASSELL, famous airman, laid out the northern air route to Europe via Greenland and Iceland and made the first flight from U. S. to Greenland in 1928. An old-timer who holds Aero Club License No. 20 (Hydro), he learned to fly in 1914 and started out in a Curtiss. During World War I he was a second lieutenant instructor. After the war, he flew for Stinson, Bellanca and Great Lakes. In World War II he served as a Colonel, being operations officer of the Greenland Base Command and commanding officer at Baffin Land and Goose Bay, Labrador, for Air Transport Command. Following the war he became vice president of Iceland Airport Corp., a subsidiary of American Overseas Airlines, to rebuild Meeho Field, now known as Keflavik Airport, in Iceland. His CAA license number is C-2421. Fish lives now in Rockford, Ill.

DIMITRY (JIMMY) VINER, chief pilot for Sikorsky Division of United Aircraft Corp. since 1944, started in aviation in 1923 with the original Sikorsky organization as a general helper. Today he has logged more helicopter time than any pilot in the world. Jimmy learned to fly in 1929, while working with Sikorsky. He flew professionally as a flight instructor at Bridgeport, Conn., during 1941-42, returning to Sikorsky in 1943, almost all of his flying since then being concentrated on helicopters, in which he holds a number of records and is credited with several rescues of military and civilian personnel.

LEON H. TANGUAY is the CAB's senior air safety investigator assigned to the New York office. He learned to fly in 1925. A native of Canada, he operated his own commercial aviation operation in Maine during 1926-27, serving as a flight instructor in

No. 14 in a Series (Advt.)

Radio Reviews

MOST RADIO PROGRESS is achieved through specialization. Because this is especially true in aircraft radio, our enlarged Love Field headquarters in Dallas are devoted strictly to specialization in radio. That way our customers can rely on the most dependable radio service possible.

IT'S LIKE THIS: Our staff consists of radio specialists only, skilled in aircraft communications from long experience. Our inventory is larger, more complete and up-to-date because it is 100% radio—from smallest parts to complete new units of the finest equipment available. Efficient craftsmanship, equipped with all necessary tools and supplies, assures highest performance standards in every job we do. And the only jobs we accept are radio.

KNOW-HOW IN RADIO SELECTION, INSTALLATION AND MAINTENANCE is our specialty. Drop in to see us any time and talk radio with our communications specialists.

★ **LEAR Distributors**

Dealers for

★ **ARC** ★ **VHF AVIGATOR**

★ **BENDIX** ★ **COLLINS**

North Texas Distributors for

Doolittle Oil Field, Railway, Taxicab Communications

Associated Radio

CARL FOX
TONY AGUILAR
LEE LANFORD

LOVE FIELD • DALLAS

One Flight

will convince you The Mooney is the buy

Those interested in transportation where time and operational cost represent an important factor have found the Mooney meets all requirements.

A demonstration of this remarkable aircraft will convince you of its amazing characteristics, ability to operate from the smallest fields with a fuel consumption of 35 to 40 miles per gallon and a rate of climb to 10,000 ft. in 12 minutes.

OUTSTANDING FEATURES, Lycoming 65 engine, Sensenich Propeller, Tricycle Gear Retracts, Range at Optimum Cruise 390 mi., Cruising Speed 125 mi., Landing Speed 40 mph., Altitude Mixture Control, Cabin Heater, Fiber-glass Sound-Proofing.

For Additional Information Contact

Distributors in Texas

Weatherly - Campbell Aircraft Co.

Highland Park Airport **Route 7**
Phone: Emerson 6-1573 **Dallas, Texas**

North Quincy, Mass., until 1931 when he re-established himself in charter, repairs, aircraft rebuilding, etc. He joined E. W. Wiggins Airways, Inc., in 1936, serving until 1942 as chief pilot and assistant operations manager at Norwood, Mass., and during 1942 he was chief pilot at the Wiggins Army Contract School in Camden, Arkansas, and flight director and operations manager of the Wiggins WTS school in Columbia, Mo. After 3 years with CAB as an air safety investigator in Chicago and Detroit, he returned in 1946 to Wiggins, but in 1947 Tanguay re-joined CAB in the position he now holds. Tanguay has over 5,600 hours, holds Commercial No. 7412 pilot's certificate, has a CAA A & E mechanic certificate, is a VAP and a Quiet Birdman (Boston).

GUSTAVO S. DE BUSTAMANTE is a VAP residing in Havana, being a pioneer of Cuban aviation. He learned to fly in 1928, when he was president of one of Cuba's early aviation firms. He holds Cuban Transport License No. 2 and also has a private pilot's license.

DEAN CULLEN SMITH learned to fly in 1917 after enlisting in the Aviation Section of the Signal Corps the same year, serving as flying instructor until he resigned from the Army in 1919 and took up barnstorming before signing up as one of the early air mail pilots. He is one of America's distinguished pilots. Air mail flying techniques pioneered by Dean included instrument, night and radio flying. After six years of mail flying, he became a pilot for National Air Transport (United Air Lines) but in 1928-29 he left the line to go to the South Pole with the Byrd expedition, returning the following year and flying for American Airlines during 1930-38. He joined Curtiss-Wright Corp. in 1939, serving as director of commercial airplane sales when he left it in 1943 to go with Fairchild as development director. From there in 1947 he joined Hughes Aircraft Co., Culver City, Calif., as director of contracts administration, a position he holds now. Dean Smith's honors and memberships are many. They include the Collier Trophy (with others) of 1923, Congressional Gold Medal for Antarctic Service, Detroit News Trophy (with others) of 1924, Distinguished Flying Cross, Harmon Trophy (1934) and memberships in ALPA, Conquistadores de Cielo, Explorers Club (New York), IAS, National Advisory Committee for Aeronautics, NAA, QB, SAE and VAP.

Dean C. Smith | Ivor Witney | Fred G. Hook, Jr.

"Many people think I was dropped on my head when a baby," says VAP'er IVOR WITNEY of San Francisco, Commercial License 5019, "but the truth is a stray brick fell on me from a falling chimney during the 1906 earthquake." Anyway, he learned to fly in a Jenny and got his license in 1928, flying for his own amazement until 1931 when he started making it his profession as an instructor, winding up with his own air service. He started to quit once—"I had made so many figure 8's they started looking like pretzels." Instead he did some racing, flew aerial fireworks and the like. During the war, Witney trained at Mather Field as a service pilot but was assigned as a glider tow pilot and later as a bombardier pilot in the West Coast Training Command. For a time he "fought the battle (very tough) of Hollywood" with the AAF First Motion Picture Unit, flying 1,667 hours in everything they had. At present he's chief pilot for Pacific Aircraft Sales (Beechcraft), and has over 7,000 hours.

Everybody in Tennessee knows FRED G. HOOK, JR., Lt. Col., USAF, and senior air instructor of the famous 155th Fighter Squadron, Tennessee Air National Guard. Hook learned to fly in 1932 under the late Captain Vernon Omilie of Memphis. He flew commercially for 8 years, crop dusting and airline piloting, before going on active duty with the Air Corps in 1940. During the war he commanded a fighter pilot replacement training unit at Punta Gorda, Fla., and served overseas as deputy commander of the 14th Air Force's 81st Fighter Group in China. He returned to airline flying with C & S after the war until he accepted a regular Air Force appointment in 1946, being assigned to his present post. ★ ★ ★

IT'S A FACT!

Bonanza Installation

MORE NARCO UNITS ARE SOLD THAN ANY OTHER MAKE!

The Narco Antenna has become a familiar sight on personal and executive airplanes all over the country. That's because more and more, plane owners and pilots are learning from enthusiastic users that Narco is the completely dependable VHF transmitter-receiver and Omni equipment. That's why more Narco units are sold than any other make.

Narco is the only VHF and navigation set that complies with or exceeds all requirements of CAA Specification ES 63B. For static-free communication, navigation, and ILS localizer approach equip your airplane with NARCO OMNI —you'll get the best dollar for dollar value, the most tubes per dollar, and the least pounds—you'll get the best for the least!

See your authorized dealer for a demonstration and immediate delivery.

West Coast Representatives
THE LEE SMITH CO.
6363 Wilshire Blvd. Los Angeles, Calif.

narco
NATIONAL AERONAUTICAL CORPORATION
WINGS FIELD, AMBLER, PA.

PRECISION . . .

In the Rebuilding of Aircraft Engines and Engine Accessories Is Essential to a Good Reputation. Our Customers Have Proven the Reliability of Engines and Accessories Rebuilt by . . .

PRECISION AEROMOTIVE
CORPORATION
MUNICIPAL AIRPORT WYDOWN —9-1234— HOUSTON 17, TEXAS

SERVICE GUIDE FOR FLIERS —

WHERE to STOP

TEXAS

For Something to Do Besides Fly . . . .

★ Land on our island's three airstrips and enjoy famous Possum Kingdom Lake. . . . Located 60 miles west of Ft. Worth. ★ Completely modern cottages. ★ Dining room with country club style dinners at reasonable prices. ★ Bass, Blue Gill, Crappie. . . . Duck and Deer Hunting in season. . . . Metal Boats with outboards. . . . Daily and weekly rates . . . Tel. Possum Kingdom 19F2, Graford, Texas.

Costello Island

WEST VIRGINIA

Wood County Airport — Parkersburg, West Virginia

Located 8 miles from Parkersburg, West Virginia, 6 miles from Marietta, Ohio. On the beautiful Ohio River. 4,000 ft. hard surfaced runways, best airport in this part of the country. Specialized service for transient pilots, hotel reservations, transportation, weather station, repair station, Gulf aviation products. Make this your STOP when flying EAST or WEST, NORTH or SOUTH.

C. L. McElroy, Manager

QUESTIONS AND ANSWERS

(Continued from page 30)

operator had no objection to its use, in such instances that could be shown. If there was likely to be a variety of numbers to be called in case the operator's wife was not at home, a small strip of slateboard attached to the sign could be used to chalk up the number to be called. Put the sign where it can be seen and make it one that will readily catch the eye.

Bill Fuller Back Home

W. G. (Bill) Fuller, until recently CAA chief of airport management, operation and maintenance in Washington, has returned to Ft. Worth as city director of aviation. He was airport manager there during 1927-42, and was Globe Aircraft's factory manager and vice president during 1942-1946.

CLASSIFIED ADVERTISING

SOUTHERN FLIGHT'S CLASSIFIED ADVERTISING RATES ARE 5c per word (minimum rate $2)

?WHO ??? WHAT ??

BOOKS

AVIATION BOOKS BY CHARLES A. ZWENG prepare you for your rating. These outstanding texts lead the field; frequent revision protect you with latest authentic "multiple choice and map examinations" with new material not available elsewhere. There is a text for each rating, viz: Flight Instructor $3.50; Aeronautical Training (Private & Commercial) $3.50; Meteorology for Airmen $3.00; Airline Transport Pilot $4.00; Flight Engineer $4.00; Aircraft Dispatcher $4.00; Link Instructor $4.00; Aircraft & Engine Mechanic $3.00; Radio and Instrument Flying $4.00; Practical Manual of the E6B Computer $2.50; Parachute Technician $3.00; Flight Instructor Oral Examination $1.00; Airport Operation and Management $4.50; Zweng Aviation Dictionary $6.00; Flying the Omnirange $4.00. (Free Catalog). Pan American Navigation Service, 12021-27 Ventura Blvd., N. Hollywood, Calif.

AIRCRAFT WANTED

POWERS & GEORGE, Aircraft Brokers, 505 N. Ervay Street, Dallas, Texas, and 475 Fifth Avenue, New York City, have purchasers for all types of aircraft. No charge for listing your ship for sale. Write for details, describing your airplane.

BELLANCA

CRUISAIRS: 21 available. 1948 No. 4953NL has 200 hours since new. Aeromatic propeller. Two-way radio. September license. Asking $4,000. Inquire, POWERS & GEORGE, Aircraft Brokers, 505 North Ervay, Dallas, Texas, or 475 Fifth Avenue, New York City.

BEECH

BEECH TWINS: 29 available. C-18-S No. 76517L, converted by Spartan, has hydromatic propellers, automatic pilot, propeller anti-icers, airline instruments and radio, is licensed, will be relicensed on sale. Absolutely top maintenance for use by executives of leading oil company. Immaculate throughout, polished to mirror finish. $19,000, or will trade liberally on D-18-S. 1946 D-18-S No. 81340L has 1027 hours since new, 30 hours since engines and airframe completely overhauled. Hydromatic propellers, new executive interior, full airline instruments and radio, dual ADF, radio telephone. Exceptional value. $35,000. Inquire, POWERS & GEORGE, Aircraft Brokers, 505 North Ervay, Dallas, Texas, or, 475 Fifth Avenue, New York City.

CESSNA

CESSNA 170s: 23 available. 1949 metal-wing No. 4117AL has 333 hours total. McCauley propeller. Two-way radio plus broadcast receiver and VHF transmitter. Primary blind instruments. Stall warning. Seat covers since new. Selling to settle estate. Asking $4,950. Inquire, POWERS & GEORGE, Aircraft Brokers, 505 North Ervay, Dallas, Texas, or, 475 Fifth Avenue, New York City.

DOUGLAS

DOUGLAS DC-3s: 9 available. No. 40332L has 397 and 297 hours total on R-1830-92 engines, 6780 hours total on airframe. Full airline equipment. Fully plushed with 28 reclining seats, rugs, lavatory, in light green, cream, and maroon. Clean, licensed, immediate delivery to settle estate. $27,000. Inquire, POWERS & GEORGE, Aircraft Brokers, 505 North Ervay, Dallas, Texas, or, 475 Fifth Avenue, New York City.

ERCOUPE

ERCOUPES: 105 available. Late 1947 No. 2502HL has 100 hours since engine major overhaul. Two-way radio. New red leatherette upholstery. Extra compass. Quick-drain gas sump. Not a scratch. Newly polished. Bargain. $850. Inquire POWERS & GEORGE, Aircraft Brokers, 505 North Ervay, Dallas, Texas, or, 475 Fifth Avenue, New York City.

FAIRCHILD

BARGAINS IN FAIRCHILD AND RANGER PARTS: Write today for our complete illustrated catalogue on Fairchild Aircraft and Ranger Engine Parts. Fully Guaranteed at prices that will save you money. You will also receive our complete catalogue of Aircraft, Industrial and Rubber products, due out this Spring. AMC SUPPLY COMPANY, P. O. Box 1440-N, Ft. Worth, Texas.

FLOATPLANES

FLOATPLANES: 15 available. 115 hp. Piper Super Cruiser No. 2885ML has 375 hours total, 40 hours since engine overhaul. Corrosion proofed. Aeromatic propeller. Two-way radio. Almost new EDO floats. Also land gear. $2,250. Inquire, POWERS & GEORGE, Aircraft Brokers, 505 North Ervay, Dallas, Texas, or, 475 Fifth Avenue, New York City.

LOCKHEED

LOCKHEED 12s: 5 available. No. 67161L has zero hours since airframe overhaul, under 100 hours since engines overhauled. Full instruments, ADF. February license. Exceptional value. $11,500. Inquire, POWERS & GEORGE, Aircraft Brokers, 505 North Ervay, Dallas, Texas, or, 475 Fifth Avenue, New York City.

WHERE HOW MUCH $

MOONEY

MOONEY DEMONSTRATOR. Two months old, 74 hours T. T. $1,795. J. A. Hudson, Rt. 7, Dallas, Texas, Emerson 6-2885.

NAVION

NAVIONS: 46 available. 1947 North American No. 8959HL has 375 hours total. September, 1949, paint job in green and cream. Latest Dash 7 metal propeller has 150 hours since new. Auxiliary tank. New green plaid upholstery with red plastic sidewalls and trim. Flares. NARCO VHF and Omnirange. Loop. Full blind instruments. Vacuum pump. Recording tachometer. Ryan mufflers, heater. Electric auxiliary fuel pump. Latest landing gear modification. Very clean. $5,000. Inquire, POWERS & GEORGE, Aircraft Brokers, 505 North Ervay, Dallas, Texas, or, 475 Fifth Avenue, New York City.

SWIFT

SWIFT 125s: 30 available. 1948 TEMCO No. 79371L has 226 hours since new, 141 hours on new engine. Aeromatic propeller. Two-way radio. Tailor made canvas cover. Excellent. $2,350. Inquire, POWERS & GEORGE, Aircraft Brokers, 505 North Ervay, Dallas, Texas, or, 475 Fifth Avenue, New York City.

AGRICULTURAL AIRPLANES

PIPER TANDEM TRAINER OWNERS: Attention! Convert your airplane to a Dixieland Duster. Three years' experience indicates that our metal hopper with agitator, venturi, and pan does best job of seeding, dusting, fertilizing, and defoliating. Contact Arkansas Aviation Service, Grider Field, Pine Bluff, Arkansas, Piper Distributors.

SPRAYERS AND DUSTERS: 46 available. All metal Luscombe T8F De Luxe Tandem, 1948, No. 16828L converted to sprayer has 300 hours total, 125 hours since engine major. Asking $2,250. Newly converted Stearmans with new wings, new metal fuselage covering, new 700 lb. capacity dusting unit, choice of Continental or Lycoming engine, $2,500. With P&W engine, $3,000. Inquire, POWERS & GEORGE, Aircraft Brokers, 505 North Ervay, Dallas, Texas, or, 475 Fifth Avenue, New York City.

Announcing—

The Amazing 170-M.P.H. Lycoming-Powered

NAVION SUPER *260*

"OUTCRUISES, OUTCLIMBS, LANDS SLOWER than anything in its class," say enthusiastic previewers of the new *Navion* 260. Think of it! Cruise at 170 mph . . . with *Navion's* famous safety, ease of flying and short field excellence still there! The Super *Navion* takes off in only 400-ft., climbs a sensational 1250 ft.-per-min. . . . it gets upstairs *quick* to take advantage of winds aloft and smoother, cooler air – just as airliners do. Service ceiling is 18,000-ft. From high-altitude fields, performance is remarkable . . . yet the Super *Navion* lands with full load and no wind at only 55 mph in under 470-ft. It's powered by a smooth-running, geared 260 hp Lycoming engine with military-type accessories. Propeller turns at only 1850 rpm at cruising, making the 260 *Navion* wonderfully quiet. And it's beautiful! It looks, and is, a thoroughbred . . . roomy, comfortable, sound-proofed, well-heated and ventilated. You'll be proud of it, because it's a *Navion* . . . and what a *Navion!* You'll thrill to the sensational new speed and performance. Truly, no other plane combines so many features so well.

Ryan Navion

No Other Plane Combines So Many Features So Well

There's a NAVION for Everyone in 1950!

- ***NAVION UTILITY 205***—Safe, modern air transportation at minimum cost.
- ***NAVION DE LUXE 205***—New beauty, comfort and safety in this rugged, dependable plane.
- ***NAVION SUPER 260***—Write today on business letterhead regarding this sensational new *Navion*.

Navion prices $9485 and up

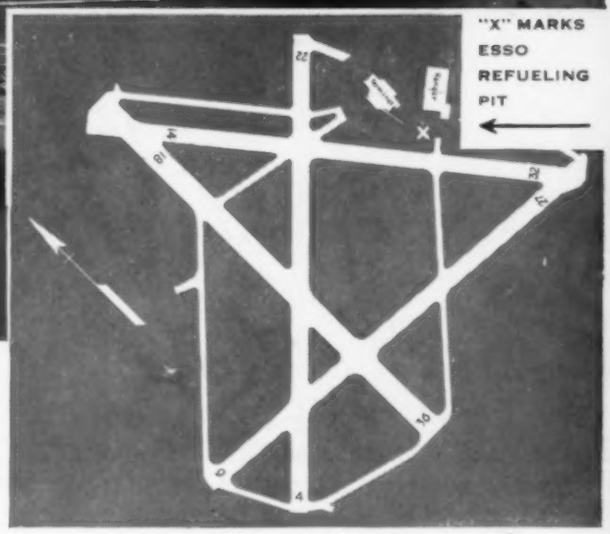
Rely on Ryan **RYAN AERONAUTICAL COMPANY, 604 LINDBERGH FIELD, SAN DIEGO 12, CALIFORNIA**

BETTER SERVICE MEANS "HAPPIER LANDINGS" AT THIS IMPORTANT AIRPORT!

TERMINAL BUILDING

BALTIMORE MUNICIPAL AIRPORT

BALTIMORE, MARYLAND



CONVENIENCE... COMFORT... SERVICE! You want the best of all these things wherever you land. And at the efficiently operated Baltimore Municipal Airport, the Atlantic Aircraft Distributors, Inc. makes it its business to provide excellent hangar and tie-down facilities... aircraft and engine repairs by skilled, licensed mechanics... fast, dependable maintenance with good aviation products.

ALWAYS AVAILABLE at Baltimore Municipal Airport are high-quality Esso Aviation Products. Proved by more than 40 years of actual flying... backed by continuing research in America's largest and most modern aviation petroleum laboratories... Esso Aviation Products are known for dependable performance!

PHIL ANDERSON, owner of Atlantic Aircraft Distributors, Inc. which sells Esso Aviation Products exclusively at Baltimore Municipal Airport.

YOU CAN DEPEND ON

WHENEVER YOU LAND at Baltimore Municipal, you'll find efficient traffic handling 24 hours a day by the CAA operated tower and weather station... a good restaurant right in the Terminal Building... and convenient bus and limousine service.